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**INTER-UNIVERSITY BOARD
INDIA**



**HAND BOOK
OF
THE UNIVERSITIES**



1958

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PREFACE

The present volume, the 13th edition of the 'Handbook of Universities' of India, Burma and Ceylon, is a record of 33 Indian Universities and the Universities of Burma and Ceylon, which are affiliated to the Inter-University Board of India. The material relating to these Universities was compiled during 1955-56 and the accounts of the Universities of Agra, Aligarh, Allahabad, Andhra, Annamalai, Banaras, Baroda, Bihar, Bombay, Calcutta, Ceylon, Delhi, Gauhati, Gujarat, Jammu & Kashmir and Karnatak were in type during 1957. On account of unexpected difficulties at the Press and delay in getting the material supplied by the Universities revised by them in time, it is regretted, the publication of this edition has been delayed. The accounts of the Universities of Kerala, Lucknow, Madras, Mysore, Nagpur, Osmania, Panjab, Patna, Poona, Rajasthan, Rangoon, Roorkee, Saugar, Sardar Vallabhbhai Vidyapeeth, S. N. D. T., Sri Venkateswara, Utkal, Viswa-Bharati and Gorakhpur, however, have been revised and brought up-to-date. The Universities of Jadavpur, Vikaram, Jabalpur, Kuruksetra and Marathwada which have been either affiliated very recently or are in process of receiving affiliation will be included in the next edition of the Handbook.

The Appendix to the volume includes notices of some of the more important research institutions functioning in India. The Inter-University Board issues every year a Bulletin which gives a brief record of the important events in the Universities during the year and it may be consulted for additional information.

Madras,
December, 1958.

V. K. AYAPPAN PILLAI,
Secretary.

THE INTER-UNIVERSITY BOARD, INDIA

The need for co-ordination in the work of the Universities in India was expressed by the Calcutta University Commission in their Report, and in 1924, acting on a resolution passed by the Congress of the Universities of the Empire, the Indian Delegates to the Congress passed a resolution recommending to the Universities of India, that an Association or a Committee of Representatives of different Indian Universities be formed, with the object of dealing with questions affecting their mutual and common interest. It was suggested in particular that such an association, if formed, should go into the question of certain difficulties which might arise owing to the conditions of admission of students to certain courses and examinations of the Universities of the United Kingdom not being suited to the qualifications which students from Indian Universities could present. The Lytton Committee on Indian students in England also hoped that the Indian University authorities would take steps at an early date to establish an Inter-University Board for the purpose of co-ordinating the courses of study in India and securing uniformity in their recognition abroad. The Indian Universities Conference held at Simla, in May 1924, passed a resolution unanimously recommending to the Universities that it was desirable that an Inter-University Organization should be established. The functions to be assigned to it were the following :—

- (i) To act as an Inter-University Organization and Bureau of Information ;
- (ii) To facilitate exchange of professors ;
- (iii) To serve as an authorized channel of communication and facilitate co-ordination of University work ;
- (iv) To appoint or recommend, where necessary, a common representative of India at an Imperial or International Conference on Higher Education ;
- (v) To assist Indian Universities in obtaining recognition for their degrees, diplomas and examinations in other Universities ;
- (vi) To act as an Appointments' Bureau for Indian Universities ;
- (vii) To fulfil such other duties as may be assigned to it from time to time by the Indian Universities.

A provisional Committee consisting of representatives of the Universities was also appointed to discuss ways and means and other preli-

minaries with regard to the formation of this Board. It prepared an estimate of probable expenditure amounting to Rs. 24,000 per annum ; and suggested that each of the fifteen Universities then in existence in India should guarantee an annual contribution of a maximum amount of Rs. 1,600 for a term of three years with effect from 1st April, 1925, and that an advance payment of not less than Rs. 100 should be made by each University on 1st February, 1925, to meet certain preliminary expenses. Twelve Universities agreed to join the Board and made a preliminary contribution. Their representatives met at Bombay in March, 1925, to consider the Agenda, which had been prepared in the first instance by the Education Department of the Government of India. The Agenda included questions relating to the future organization and work of the Board as well as a number of references made in advance to the Inter-University Organization by the Universities' Conference held at Simla. The first annual meeting was held at Delhi in February, 1926. Since then the Board has met every year : at Banaras in February, 1927, at Madras in February, 1928, at Patna in February, 1929, at Dacca in March, 1930, at Mysore in February, 1931, at Lahore in March, 1932, at Hyderabad in February, 1933, at Delhi in March, 1934, at Calcutta in February, 1935, at Aligarh in February, 1936, at Nagpur in February, 1937, at Allahabad in December, 1937, at Bombay in February, 1939, at Waltair in December, 1939, at Trivandrum in January, 1941, at Annamalainagar (Chidambaram) in January, 1942, at Mysore in January, 1943, at Hyderabad (Deccan) in December, 1943, at Patna in December, 1944, at Colombo in December, 1945, at Jaipur in December, 1946, at Cuttack in December, 1947, at Madras in December, 1948, at Banaras in February, 1950, at Rangoon in December, 1950, at Delhi in December, 1951, at Waltair in January, 1953, at Mysore in December, 1953, at Patna in January, 1955, at Aligarh in January, 1956, at Calcutta in January, 1957 and at Ceylon in December, 1957. All the 39 Universities in India, Burma and Ceylon are now members of the Board.

Besides the annual meetings attended by the representatives nominated to the Board by the Universities of India, Burma and Ceylon, the Board also holds larger Quinquennial Conferences of delegates from all the Universities. Apart from the first Conference held at Simla in May, 1924, prior to the establishment of the Inter-University Board, Conferences of Indian Universities were held at Delhi in October, 1929, opened by His Excellency Lord Irwin, Viceroy and Governor-General of India ; at Delhi again in March, 1939, opened by His Excellency Lord Wellington, Viceroy and Governor-General of India ; in Bombay in March, 1939, opened by His Excellency Sir Roger Lumley, Governor of Bombay ; and at Hyderabad (Deccan) in December, 1943, opened by His Excellency Col. Nawab Sir Muhammad Ahmad Said Khan Bahadur, President of the Executive Council of the Hyderabad State and Chancellor of the Osmania University. The Sixth Quinquennial Conference

was held at Madras in December, 1948, and the Seventh Quinquennial Conference was held at Mysore in December, 1953.

The Inter-University Board has in recent years made itself responsible for Inter-University Sports and Athletics. A subsidiary body called the Inter-University Sports Board consisting of a Sports representative from each University has been set up to conduct tournaments in all the major games and in athletics.

The office of the Inter-University Board was moved to Madras from Delhi in February, 1954, and is housed in the University Buildings by the courtesy of the Madras University. It has now been decided that the office of the Inter-University Board should be shifted back to Delhi and located there permanently. It is hoped that it will be able to function in Delhi from early 1959.

Madras,
December, 1958.

V. K. AYAPPAN PILLAI,
Secretary.

UNIVERSITIES IN INDIA

A historical note on Indian Universities will not go back to the great centres of higher education in the Brahminical, the Buddhist or the Mohammedan period, as with them the modern Indian institutions have no relationship, but it has to start with the efforts of the Court of Directors of the East India Company for the spread of education in India. One of the Directors is reported to have said in 1792: "We have just lost America from our folly, in having allowed the establishment of schools and colleges and it will not do for us to repeat the same act of folly in regard to India." In 1797, however, Charles Grant considered it imperative to impart the knowledge of the English language to Indians: "With our language much of our useful literature might, and would, in time, be communicated. The Hindus would become acquainted with the history of their own species, the past and present state of the world." In 1813, the East India Company decided to set apart a sum of not less than one lakh of rupees each year for the revival and improvement of literature as also for the introduction and promotion of a knowledge of the sciences. Cultured Indians were also conscious of this need and in 1823 Rani Mohan Roy expressed disappointment at the establishment of a Sanskrit school in Calcutta as that could only load the minds of youth with grammatical niceties and meta-physical disquisitions. He wanted the Government to promote "a more liberal system of instruction embracing Mathematics, Natural Philosophy, Chemistry and Anatomy, with other useful sciences." The Hindu College had already been founded in Calcutta in 1817 for the purpose of imparting western knowledge through the medium of English and this had been followed in 1818 by the establishment of a college at Serampore by Christian Missionaries for the instruction of youth in Eastern Literature and European Science. In 1827, this institution obtained a Royal Charter from the King of Denmark to whom Serampore belonged and it may thus claim to be the first western University in India. Christian Missionaries were also responsible for the establishment of two colleges in Calcutta, the Bishop's College in 1820 and the General Assembly's Institution in 1820, while lay enterprise led to the foundation of the Calcutta Medical College in 1835 with the object of teaching European Medical Science.

This urge for imparting western learning had brought its champions into conflict with the advocates of oriental education and the famous Minute of Macaulay in 1835 settled the issue in favour of the former by laying down that all funds available for education were to be devoted mainly to support schools and colleges in which western learning was imparted through the medium of English.

The first proposal for founding a University in India was made by the Council of Education in Bengal in the year 1845, but was not accepted by the Board of Directors of the East India Company, who considered the scheme somewhat premature. The famous despatch of Sir Charles Wood in 1854, soon after the renewal of the Charter of the East India Company in the previous year, brought the question once more to the front, as it demanded a scheme of education for all India, far wider and more comprehensive than the Local or Supreme Government would have ventured to suggest. "Among many subjects of importance," proclaimed the epoch-making document, "none have a stronger claim to our attention than that of education. It is one of our most sacred duties to the nation, to be the means, as far as in us lies, of conferring upon the natives of India those vast moral and material blessings which flow from the general diffusion of useful knowledge and which India may under Providence derive from her connection with England."

It was in accordance with this declared policy of the Government of India, that the foundations of University education were laid in the country with the establishment of the Universities of Calcutta, Bombay and Madras in the year 1857, the necessary legislation incorporating them having been passed respectively on 24th January, 18th July and 15th September of the year. The jurisdiction of the Calcutta University, which at the beginning included practically all Northern India, was soon found to be unwieldy and it was therefore broken up by the establishment of two additional Universities, the University of the Panjab which was founded in 1882 and the University of Allahabad which followed five years later in 1887.

These five Universities were found adequate for several years to meet the needs of the entire country in the matter of higher education, though many important events had happened during the interval. An Educational Commission, presided over by Sir William Hunter, was appointed in 1882, "to enquire particularly into the manner in which effect has been given to the principles of the Despatch of 1854, and to suggest such measures as it may think desirable in order to the further carrying out of the policy laid down." The deliberations of this Commission resulted in recommendations of a far-reaching nature with regard to the control of higher education in the country and the encouragement of private enterprise in the matter of colleges, but no additions were made to the existing Universities.

The next landmark in the history of Indian Universities was the appointment by Lord Curzon, of a Universities Commission in the year 1902. The recommendations of the Commission were mainly in the direction of reforms in the constitutions of Universities, "the educational standards should be allowed a predominant influence in them." An enactment for amending the law relating to Universities in India came into effect on the 1st September, 1904 and new Senates and Syndi-

cates were formed in accordance with the provisions of the new code. This Act laid new responsibilities upon Universities as regards both their control of affiliated colleges and their own teaching functions.

The Universities of India were not originally teaching bodies, but the Act of 1904 specified the provision of instruction as one of their duties and gave them the power of appointing professors and lecturers, of holding and managing endowments, and of erecting, equipping and maintaining University libraries, laboratories and museums. Though the bulk of the teaching continued to be in affiliated colleges, a certain amount of higher instruction now began to be concentrated under University management. Assisted by grants from the Imperial Government and in a few cases, by private endowments, some of the Universities were successful in the formation and maintenance of colleges for ordinary instruction, in the partial substitution of University teaching for college teaching in the courses for the Master's Degree and in the organization of research and lectures of general interest.

The resolution of the Government of India on Indian educational policy issued in 1913 drew attention not only to the need for more Universities in India, but also for a better type of University organization. "At present," the Resolution observed, "there are only five Indian Universities for 185 arts and professional colleges in British India besides several institutions in Native States. The day is probably far distant when India will be able to dispense altogether with the affiliating University. But it is necessary to restrict the area over which affiliating Universities have control, by securing, in the first instance, a separate University for each of the leading provinces in India, and, secondly, to create new local teaching and residential Universities within each of the provinces in harmony with the best modern opinion as to the right road to educational efficiency." The country was soon to benefit by activities in both these directions.

If the earlier Universities of India were started, more or less entirely, under official auspices, there were soon to be two new Universities in the country to serve the special needs of the Hindus and Muhammadans, founded largely by the efforts of the leaders of the two communities themselves, though aided by the Government and established by Acts of Legislature like the first models. The Banaras Hindu University came into existence in 1916 and the Aligarh Muslim University in 1920. The primary aim of the former is to preserve "the best thought and culture of the Hindus and all that was good and great in the ancient civilization of India," though admission is not restricted to Hindus only and though it has extensive departments of modern learning in Art as well as in Science, including Engineering, Mining and Metallurgy and Agriculture. The aims of the Aligarh Muslim University are on similar lines, though it is also open, like the Banaras Hindu University, to students of all communities and has all the usual departments of a modern University. The provision of faculties of Oriental Learning and of

religious instruction is a special feature of these institutions. It is only necessary to add that both these Universities were based on earlier foundations, the Central Hindu College of Mrs. Annie Besant at Panaras and the Muhammadan Anglo-Oriental College of Sir Syed Ahmad at Aligarh.

The progress of higher education in Indian States was responsible for the foundation of the University of Mysore in 1916, the Osmania University of Hyderabad in 1918 and the University of Travancore in 1937. A noteworthy feature of the Osmania University is that all teaching in non-language subjects including even such technical subjects as Medicine and Engineering, is through Urdu, the official language of the State.

The constitution of Bihar and Orissa into a separate province resulted in the foundation of a new University at Patna in 1917.

The Calcutta University Commission, presided over by Sir Michael Sadler, which deliberated from 1917 to 1919, was responsible for considerable activity in the University world of India. One of its primary recommendations was that Universities should be relieved of their intermediate work so that they might be able to concentrate attention on real University teaching and the advancement of higher learning. The movement for the establishment of unitary and residential Universities which was also strongly advocated by the Commission received great impetus and several Universities were founded in the years immediately following the report, largely on the new lines recommended which had also already been adopted by Banaras and Mysore in 1916. Reference has been made to the Aligarh Muslim University which was founded in 1920. A University was also established in the same year at Rangoon to satisfy the aspirations of Burma. The University of Lucknow was incorporated in December, 1920. The University of Dacca came into existence on the 1st of July, 1921. The Imperial Capital of Delhi obtained a University of its own by Act VII of 1922. The Central Provinces which had to be content till then with the affiliation of their colleges to the University of Allahabad obtained a new University of their own at Nagpur in 1923.

Though the recommendations of the Calcutta University Commission have not been given effect to in any substantial manner in the University of Calcutta for which they were primarily intended, they have been responsible for many changes in the organisation of higher education in the United Provinces. After the foundation of the unitary, teaching and residential Universities of Banaras, Aligarh, and Lucknow the constitution of Allahabad was also changed in 1922, making it a University of the unitary type though the associated colleges continued to be controlled by it till July, 1927. The formation of the Agra University during the year, however, freed Allahabad completely from its external jurisdiction and it now functions entirely as a University of the unitary type. Agra is an affiliating University having jurisdiction

over the colleges scattered in all parts of the United Provinces. The establishment of the Rajputana University at Jaipur in 1947 relieved Agra of responsibility for University education in Rajputana.

Another notable feature in connection with the Universities in the United Provinces is that except in the case of Aligarh and Banaras, Intermediate education has been removed from their control with the formation of a separate Board of High School and Intermediate Education in 1921, established by a special Act of the Legislature, in accordance with one of the most important recommendations of the Calcutta University Commission. Similarly in Rajputana and Central India, Intermediate education is controlled by the Board of High School and Intermediate Education for Rajputana (including Ajmer-Merwara), Central India and Gwalior, established in 1929.

As might have been expected the establishment of Universities of a newer type could not but exercise considerable influence on the older Universities. The University of Calcutta may be said to have entered upon an entirely new chapter in her history with the Indian Universities Act of 1904, and the constitution has again been amended, more than once, since that date. It has now extensive and well-established teaching departments, though it still continues to be one of the largest affiliating Universities in India. The University of Bombay underwent complete reorganization by the Act of 1928, which reduced the proportion of the nominated to the elected members of the Senate and enabled various popular interests to be represented on it. By the new Act, the executive functions of the University are carried on by the Syndicate, while the academic work is looked after by the Academic Council. In the case of the University of Madras, the Indian Universities Act of 1904 has been superseded by the Madras University Act of 1923, with a view to establishing a teaching and residential University at Madras, while enabling the University to exercise due control over the quality of the teaching given by constituent and affiliated colleges. This Act has again been amended by Act XII of 1929.

The year 1926 witnessed the beginning of important University developments in the Madras Presidency with the establishment of the Andhra University for the special needs of the Telugu people in the north. The headquarters of the University has been located, after prolonged controversy, at Waltair. The Annamalai University of Annamalai-nagar at Chidambaram in South India began to function in July, 1929, and was rendered possible by the princely generosity of the Hon'ble Raja Sir Annamalai Chettiar who gave a donation of twenty lakhs of rupees for the purpose in addition to the buildings, equipment and property of the Colleges for English, Tamil and Sanskrit studies founded some years earlier by him at the same place. In 1937, the Government of Travancore established a University primarily for developing technological education, providing for original research in applied Science, and for conserving Kerala Art and Culture.

University College, Colombo, obtained a charter in 1942, and it caters to the needs of the new Dominion of Lanka. Utkal University obtained its charter in 1943, and the University of Gauhati in 1947. The Central Provinces with their two distinctive areas, the Hindi-speaking and the Marathi-speaking ones, have felt the necessity of a second University, and a generous donation by Sir Hari Singh Gour led to the foundation of a University at Saugar in 1946. The Rajputana States, after a considerable amount of discussion, decided to have a University of their own with headquarters at Jaipur which started functioning in 1947. It is an affiliating University having under its jurisdiction the Colleges in Udaipur, Jaipur, Jodhpur, Bikaner, Alwar and Kotah.

With the partition of India the old University of the Panjab was no longer able to cater to the needs of Eastern Panjab which has now a University of its own with headquarters at Chandigarh. Political exigencies have also led to the formation in 1949 of the University of Jammu and Kashmir with its headquarters at Srinagar.

With independence there has come a new desire to preserve and develop local cultures and one consequence of this has been the establishment of new Universities intended chiefly to cater to the special cultural and intellectual needs of certain regions. Thus the University of Poona was established in 1948.

Proposals are afoot for a new Karnatak University at Dharwar, and a Madhyabharat University at Indore. Active attention is being given to the question of founding other Universities in certain other regions.

The growth in the number of Universities indicates the growing demand for higher education in the country. There has also been, in recent years, a great deal of internal expansion in many of the older Universities.

There are enormous problems confronting the Universities of India today: problems of finance, accommodation, equipment, staff, medium of instruction. The Universities are conscious too, of the need to become at once expressions of a re-vitalised Indian culture and channels of modern scientific knowledge. It may be confidently hoped that the Universities of India will prove adequate to the tasks and responsibilities imposed on them.

Delhi,
15th March, 1950.

SAMUEL MATHAI,
Secretary (1948-53),
Inter-University Board, India.

INTER-UNIVERSITY BOARD OF INDIA

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- Shri S. Govindarajulu, M.A., LL.B. (Cantab.), B.L., Bar-at-Law,
Vice-Chancellor, Sri Venkateswara University, Tirupati.
- Dr. P. Parija, O.B.E., D.Sc., M.A. (Cantab.), I E S. (Retd.), F.N.I.,
Vice-Chancellor, Utkal University, Cuttack.
- Dr. Mata Prasad, D.Sc., F.R.I.C., F.N.I.,
Vice-Chancellor, Vikram University, Ujjain.
- Dr. S. C. Bose, D.Sc. (Cal.),
Vice-Chancellor, Visva-Bharati University, Santiniketan.

Succession List of Chairmen of the Inter-University Board of India and the places where the annual meetings were held.

The Rt. Hon'ble Dr. Sir Akbar Hydari, Nawab Hyder Nawas Jung Bahadur, B.A., LL.D., Finance Member, Executive Council, and Member, University Council, Osmania University, Hyderabad (Dn.) (1925-27), (*Delhi and Banaras*).

Sir R. Venkataratnam Naidu, Kt., M.A., Vice-Chancellor, University of Madras (1927-28), (*Madras*).

Prof. A. C. Woolner, C.I.E., M.A., Vice-Chancellor, The Punjab University, Lahore (1928-30), (*Patna and Dacca*).

Principal A. B. Dhruva, M.A., LL.B., Pro-Vice-Chancellor, Banaras Hindu University, Banaras (1930-31), (*Mysore*).

The Rev. Dr. W. S. Urquhart, M.A., D.Litt., D.D., D.L., Principal, Scottish Church College, Calcutta (1931-32), (*Lahore*).

Diwan Bahadur Sir K. Ramunni Menon, Kt., M.A., (Cantab), Vice-Chancellor, University of Madras, Madras (1932-33), (*Hyderabad-Dn*).

Prof. G. H. Langley, M.A., I.E.S., Vice-Chancellor, University of Dacca, Ramna P.O., Dacca (1933-34), (*Delhi*).

Prof. P. A. Wadia, M.A., University of Bombay, Bombay (1934-35), (*Calcutta*).

R. Littlehales, Esq., C.I.E., M.A., Vice-Chancellor, University of Madras, Madras (1935-36), (*Aligarh*).

Pandit Amaranatha Jha, M.A., Professor of English, University of Allahabad, Allahabad (1936-37), (*Nagpur*).

Dr. C. R. Reddy, M.A. (Cantab.), D.Litt., M.L.C., Vice-Chancellor, Andhra University, Waltair (1937-38), (*Allahabad*).

Diwan Bahadur S. E. Runganadhan, M.A., L.T., M.L.C., Vice-Chancellor, University of Madras, Madras (1938-39), (*Bombay*).

Rajakaryapravina N. S. Subba Rao, M.A. (Cantab.), Barrister-at-Law, Vice-Chancellor, University of Mysore (1939-40), (*Waltair*).

Dr. A. C. Sen Gupta, M.A., D.Litt., I.E.S., Director of Public Instruction and Secretary to Government, Central Provinces and Berar, Nagpur (1940-41), (*Trivandrum*).

- The Hon'ble Dr. Syamprasad Mookerji, M.A., B.L., D.Litt., Barrister-at-Law, M.L.A., 77, Ashutosh Mookerji Road, Calcutta (1941-42), (*Annamalainagar*).
- Prof. A. B. A. Haleem, B.A., (Oxon.), Bar-at-Law, Pro-Vice-Chancellor, Aligarh Muslim University, Aligarh (1942-43), (*Mysore*).
- Sir S. Radhakrishnan, M.A., D.Litt., LL.D., F.B.A., Vice-Chancellor, Banaras Hindu University, Banaras (1943-44), (*Hyderabad-Dn.*).
- Dr. Sachchidanand Sinha, D.Litt., Barrister-at-Law, M.L.A., Vice-Chancellor, University of Patna, (1944-45), (*Patna*).
- Sir Maurice Gwyer, K.C.B., K.C.S.I., D.C.L., LL.D., Vice-Chancellor, University of Delhi, Delhi (1945-46), (*Colombo*).
- Dr. J. C. Chatterji, M.A., D.Litt., M.L.A., (Central), Vice-Chancellor, University of Agra, Agra (1946-47), (*Jaipur*).
- Prof. N. K. Sidhanta, M.A. (Cantab.), Professor of English and Dean of the Faculty of Arts, University of Lucknow, Lucknow (1947-48), (*Cuttack*).
- Sir A. L. Mudaliar, M.D., LL.D., D.C.L., D.Sc., F.R.C.O.G., F.A.C.S., Vice-Chancellor, University of Madras, Madras (1948-49), (*Madras*).
- Sir Ivor Jennings, M.A., D.Litt., LL.D., Vice-Chancellor, University of Ceylon, Colombo (1949-50), (*Benaras*), (*President*).
- Pandit K. L. Dubey, B.A., LL.B., Vice-Chancellor, University of Nagpur, Nagpur (1950-51), (*Rangoon*), (*President*).
- Dr. G. S. Mahajani, M.A., Ph.D., Vice-Chancellor, University of Rajputana, Jaipur (1951-52), (*Delhi*), (*President*).
- Sri K. K. Handiqui, M.A., (Cal. et Oxon.), Vice-Chancellor, University of Gauhati, Gauhati (1952-53), (*Waltair*), (*President*).
- Dr. Htin Aung, M.A., B.Litt., Ph.D., D.Litt., Bar-at-Law, Rector, University of Rangoon, Rangoon (1953-54), (*Mysore*), (*President*).
- Dr. Zakir Husain, M.A., Ph.D., Vice-Chancellor, Aligarh Muslim University, Aligarh (1954-55), (*Patna*), (*President*).
- Dewan Anand Kumar, M.A. (Cantab.), Vice-Chancellor, Punjab University, Solan (Simla Hills), (1955-56), (*Aligarh*), (*President*).
- Shrimati Hansa Mehta, B.A. (Hons.), Vice-Chancellor, M. S. University of Baroda, Baroda (1956-57), (*Calcutta*), (*President*).

Dr. V. S. Krishna, B.A. (Oxon.), Ph.D. (Vienna), Vice-Chancellor, Andhra University, Waltair (1957-58), (*Peradeniya, Ceylon*), (*President*).

Shri G. C. Chatterji, M.A. (Cantab.), Vice-Chancellor, University of Rajasthan, Jaipur (1958-59), (*Chandigarh*), (*President*).

Succession list of Secretaries of the Inter-University Board of India.

1. Prof. N. S. Subbha Rao, M.A. (Cantab.), Bar-at-Law, University Professor of Economics, and Principal, Maharaja's College, Mysore (1925-27).
2. Prof. P. Seshadri, M.A., Dean, Faculty of Commerce, University of Agra, and Senior Professor of English, Sanatan Dharma College, Kanpur (1927-32).
3. Prof. A. R. Wadia, B.A. (Cantab.), Barrister-at-Law, Professor of Philosophy, Maharaja's College, Mysore (1932-37).
4. Prof. N. K. Sidhanta, M.A. (Cantab.), Dean, Faculty of Arts, and Professor of English, University of Lucknow, Lucknow (1937-42).
5. Prof. H. K. Sherwani, M.A. (Oxon.), F.R.Hist S., Barrister-at-Law, Head of the Department of History and Political Science, Osmania University, Hyderabad (Deccan) (1942-45).
6. K. P. Sinha, Esq., M.A. (Cantab.), Principal, G. B. B., College, Muzaffarpur (1945-31st January, 1947).
7. Dr. J. C. Chatterjee, M.A., D.Litt., M.L.A. (Central), 10-A, Cavalry Lines, Delhi (1st February, 1947 to 31st October, 1947).
8. Samuel Mathai Esq., M.A., (Oxon.), Head of the Department of English, St. Stephen's College, and Reader in English, Delhi University, Indar Villa, Roopnagar, Delhi (1st April, 1948 to 28th December, 1953).
9. Sri V. K. Ayappan Pillai, M.A. (Madras), B.A. (Oxon.), Retd. Principal and Professor of English, Presidency College, Madras (1st February, 1954).

AGRA UNIVERSITY

Introductory: Character of the University

The Agra University was brought into existence on the 1st of July, 1927, by an Act of the Legislature of the Uttar Pradesh, for the purpose of affiliating the Colleges associated with the University of Allahabad, as reorganized by the Allahabad University Act, 1921, so as to set the University of Allahabad free to function as a unitary teaching and residential University by relieving it of the responsibility of controlling the quality and character of teaching given in its name by the associated colleges (situated outside the territorial area of 10 miles radius from the Convocation Hall of the University), and placing such responsibility upon an affiliating University at Agra.

The jurisdiction of the University extends over Uttar Pradesh, Madhya Bharat, Vindhya Pradesh, Bhopal and Ajmer States.

Officers of the University

Chancellor

Shri K. M. Munshi.

Rajyapal, Uttar Pradesh (*Ex-Officio*).

Vice-Chancellor

Lt.-Col. K. P. Bhatnagar, M.A., LL.B.

Registrar

Dr. L. P. Mathur, D.Sc.

Deans of the Faculties

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|---------------------------|----|---|
| 1. Faculty of Arts | .. | Shri H. Ghosh, M.A., Principal,
A.K. College, Shikohabad. |
| 2. Faculty of Science | .. | Dr. B. C. Mahendra, D.Sc.,
Agra College, Agra. |
| 3. Faculty of Law | .. | Shri B. L. Misra, B.A., LL.B.,
V.S.S.D. College, Kanpur. |
| 4. Faculty of Commerce | .. | Shri R. S. Dwivedi, M.A., B.COM.,
St. John's College, Agra. |
| 5. Faculty of Agriculture | .. | Dr. U. S. Sharga, M.Sc., Ph.D.,
Govt. Agricultural College,
Kanpur. |

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| 6. Faculty of Medicine | .. | Dr. A. S. Paranjpe, M.D.,
G. R. Medical College, Gwalior. |
| 7. Faculty of Veterinary Science
and Animal Husbandry. | | Dr. B. P. Pandey, M.Sc., D.Sc.,
U. P. College of Veterinary
Science and A. H., Mathura |
| 8. Faculty of Engineering | .. | Shri Bhagat Das Satsangi, B.Sc.,
A.M.I.E., Principal, Engineering
College, Dayalbagh, Agra. |

Constitution of the University

The authorities of the University are :—

The Senate, the Executive Council, the Academic Council, the Finance Committee and the Faculties of Arts, Science, Law, Commerce, Agriculture, Medicine, Veterinary Science and Animal Husbandry, and Engineering. The Senate is the Supreme Governing body of the University and the Executive Council the Executive Body; the Academic Council advises the Executive Council on academic matters. Each Faculty has its Boards of Studies, whose reports, regarding the courses of study it considers and forwards to the Academic Council with its own recommendations.

Teaching and Affiliated Colleges

There are at present eighty colleges affiliated to the University a list of which is given below. The University has no teaching staff of its own, but teaching is carried on at present in the affiliated colleges, which have their own staff.

Under the Allahabad University Act, 1921 [Section 7 (5)], the affiliated colleges were not allowed to maintain Intermediate classes for the purpose of preparing students for admission to the University, beyond a period of five years from the commencement of the Allahabad University Act, 1921, save with the previous sanction of the Local Government and for such period as the Local Government may direct, but under the Agra University Act (Section 39) this restriction on the maintenance of the Intermediate classes was removed. However, under the Agra University Act, as amended by the Agra University (Amendment) Act, 1953, such affiliated colleges which on the first day of July 1953 were maintaining simultaneously Intermediate and Post-graduate classes, may, at their option, continue to maintain both the Intermediate and Post-graduate classes so, however, that one or the other of these classes shall cease to be maintained before the expiry of the academic year 1957-58. Besides, a college not being a college intended exclusively for the education of women, cannot be affiliated after the commencement of the Agra University (Amendment) Act, 1953, if it maintains classes for preparing students for the Intermediate examination. The University, however, exercises control over the quality and the character of teaching given in the degree and post-graduate classes only, and not in the Intermediate classes in the affiliated colleges which is the special feature of the Agra University Act.

Affiliated Colleges

<i>Name of College</i>	<i>Name of the Principal</i>
1. Agra College, Agra.	Dr. H. N. Sinha, M.A., PH.D.
2. St. John's College, Agra.	Shri P. T. Chandi, M.A., M.SC.
3. Meerut College, Meerut.	Shri Madan Mohan, M.A.
4. Christian College, Indore.	Shri R. N. Langer, M.A. (offg.).
5. Holkar College, Indore.	Dr. W. V. Bhagwat, D.SC.
6. V. S. S. D. College, Kanpur.	Shri L. C. Tandon, M.A., M.COM.
7. Bareilly College, Bareilly.	Shri R. K. Sharma, M.A., LL.B.
8. Govt. College, Ajmer.	Shri V. V. John, M.A.
9. D. A. V. College, Kanpur.	Shri S. P. Saksena, M.A., LL.B.
10. Victoria College, Gwalior.	Shri S. K. Abhyankar, M.SC.
11. St. Andrew's College, Gorakhpur.	Shri M. O. Varkey, M.SC.
12. Christ Church College, Kanpur.	The Rev. R. G. Slater, M.A.
13. Agricultural College, Kanpur.	Dr. J. G. Shrikhande, M.SC., PH.D. (Offg.).
14. Kamla Raja Girls' College, Gwalior.	(Sm.) Uma Johri, M.A.
15. Balwant Rajput College, Agra.	Dr. Sabal Singh, M.SC. PH.D. (offg.)
16. Sarojini Naidu Medical College, Agra.	Dr. H. N. Bhatt, M.B., F.R.C.S., D.M.R. & E., P.M.S.
17. A. S. Jat College, Lakhaoti.	Dr. G. N. Pathak, M.SC., PH.D. (London).
18. Darbar College, Rewa.	Dr. A. P. Mathur, M.A., PH.D. (offg.)
19. S. M. College, Chandausi.	Shri K. Kumar, M.SC.
20. Madhava College, Ujjain.	Shri D. M. Borgaonkar, M.A.
21. N. R. E. C. College, Khurja.	Shri P. D. Gupta, M.A.
22. D. A. V. College, Dehra Dun.	Dr. R. N. Saksena, M.A., PH.D., D.LITT.

<i>Name of College</i>	<i>Name of the Principal</i>
23. G. R. Medical College, Gwalior.	Dr. B. N. Balkrishna Rao, M.B.B.S., F.R.C.S.
24. Shibli National College, Azamgarh.	Shri Shaukat Sultan, M.A., LL.B
25. Women's Training College, Dayalbagh, Agra.	Smt. S. P. Sukhia, M.A., T.DIP.
26. Radhasoami Educational Institute, Dayalbagh, Agra.	Shri B. P. Johri, M.A.
27. Barahseni College, Aligarh.	Dr. M. C. Mathur, M.A., PH.D.
28. A. K. College, Shikohabad.	Shri H. Ghosh, M.A.
29. D. S. College, Aligarh.	Shri V. G. Jhingran, M.Sc., B.ED
30. K. R. College, Mathura.	
31. Gandhi Faiziam College, Shahjahanpur.	Shri M. R. Kidwai, M.Sc., L.T.
32. Satishchandra College, Ballia.	Shri J. P. Singh, M.A.
33. M. G. M. Medical College, Indore.	Dr B. C. Bose, M.D., D.Sc., D.T.M.
34. U. P. College of Veterinary Science and Animal Husbandry, Mathura.	Shri C. V. G. Choudary, B.Sc., M.R.C.V.S
35. K. G. K. College, Moradabad	Dr Kashi Prasad Mathur, M.A., PH.D.
36. T. D. K. College, Jaunpur.	Shri H. N. Singh, M.A., M.L.C.
37. Raghunath Girls' College, Meerut.	Smt. L. Sharma, M.A.
38. Subhas National College, Unao.	Shri Lakshmi Nath Misra, M.A., LL.B., L.T.
39. D. J. College, Baraut.	Shri A. B. Malkani, M.sc.
40. Mahanand Mission Harijan College, Ghaziabad.	Shri B. S. Mathur, M.A., L.T.
41. Jat Vedic College, Baraut.	Ch. Shiva Singh, M.A.
42. Yuvraj Dutta College, Lakhimpur-Kheri.	Th. Jaideo Singh, M.A.
43. Maharaja College, Chhatarpur.	Dr. Hari Ram Misra, M.A., D.LITT.
44. Raza College, Rampur.	Dr. P. N. Kulshereshta, M.A., D.PHIL.
45. Hindu College, Moradabad.	Dr. D. N. Chakravarty, D.Sc.

<i>Name of College</i>	<i>Name of the Principal</i>
46. Hamidia College, Bhopal.	Shri P. C. Malhotra, M.A.
47. Bundelkhand College, Jhansi.	Shri Sukh Swarup, M.A.
48. S. D. College, Muzaffarnagar.	Shri Dhuru Singh, M.A.
49. M. P. College, Gorakhpur.	Shri H. P. Shahi, M.A.
50. Engineering College, Dayalbagh, Agra.	Shri Bhagat Das Satsangi, B.SC., A.M.I.E. (Offg.).
51. D. L. S. G. Degree College, Alмора.	Shri A. D. Pant, M.A.
52. D. A. V. College, Muzaffarnagar	Shri Shital Prasad, M.SC.
53 S. S. V. College, Hapur.	
54. Savitri Girls' College, Ajmer.	Km. M. Bhatji, M.A.
55. D. V College, Orai.	Shri Kishori Lal Khare, M.A.
56. Sri Saket Mahavidyalaya (Faizabad Degree College), Faizabad.	Dr. H. Hukku, D.LITT.
57. D. A. V. College, Ajmer.	Shri D. V. Vable, M.A.
58. Th. Devi Singh Bisht Govt. College, Nainital.	Dr. K. N. Srivastava, M.A., D.LITT.
59 Kashi Naresh Govt Degree College, Gyanpur (Banaras).	Dr. J. L. Sharma, D.SC
60 M. B. College of Agriculture, Gwalior.	Dr. T. R. Mehta, PH.D.
61. N. A. S. College, Meerut.	Shri Banwari Lal Sharma, M.A.
62. Gokaldas Hindu Girls' College, Moradabad.	Km. B. Sen Gupta, M.A., B.LITT.
63. S. N. Sen Balika Vidyalaya Degree College, Kanpur.	Dr. (Sm.) G. D. Mathur, PH.D.
*64. J. V. Jain College, Saharanpur.	Sri Rup Chand Jain, M.A.
*65. Town Degree College, Ballia.	Shri C. P. Chandrapuri Goswami, M.A., B.COM.
*66. Maharani Lal Kunwari Degree College, Balrampur.	Shri R. K. Vaish, M.A.
*67. Deoria Mahavidyalaya, Deoria.	Dr. G. L. Maheshwari, M.SC., PH.D.
*68. K. V. Degree College, Machhra (Meerut).	Dr. S. R. Tyagi, M.A., PH.D.

<i>Name of College</i>	<i>Name of the Principal</i>
*69. Buddha Degree College, Kushi-nagar (Deoria).	Sri R. S. N. Tripathi, M.A.
*70. S. D. Govt. College, Beawar.	Dr. R. N. Bagehi, M.A., PHD.
*71. Rafi Ahmad Kidwai Agricultural Institute, Sehore, (Bhopal).	Dr. P. S. Lamba, M.Sc., PH.D.
*72. Gandhi Medical College, Bhopal.	Dr. S. C. Sinha, B.Sc., M.B., F.R.C.S.
*73. Teachers' Training College, Bhopal.	Shri D. P. Verma, B.A., B.T. (Actg. Principal).
*74. M. B. College of Veterinary Science and Animal Husbandry, Mhow.	Sri R. L. Kaushal, L.V.P.
75. Sajjan Degree College, Ratlam.	
76. Govindram Seksaria Technological Institute, Indore.	
77. Narain Degree College, Shikohabad.	
78. D. A. V. College, Bulandshahr	Dr M S Natarajan, M.A., PH.D
79. Girbarlal Pyarelal Degree College, Morena.	
80. R. S. K. Degree College, Shimbhaoli (Meerut).	

Detailed information regarding the staff, the hostels attached, students in the colleges, libraries, laboratories and museums, fees, freeships, prizes, and medals, bursaries and scholarships can be obtained from the prospectus of each college, or by correspondence with the Principal.

Degrees, Admission to Examinations and Courses of Study

Degrees

In the Faculty of Arts, the University grants at present the B.A., M.A., B.T., Ph.D. and D.Litt. degrees; and in the Faculty of Science the B.Sc., M.Sc., Ph.D. and D.Sc. degrees. The Professional degrees are the B.Sc. (Pharm.) in the Faculty of Science, the Master of Laws and the Bachelor of Laws in the Faculty of Law, the Master of Commerce and the Bachelor of Commerce in the Faculty of Commerce, the Master of Science in

*The Colleges marked with an asterisk have been sanctioned provisional affiliation.

Agriculture, the Bachelor of Science in Agriculture in the Faculty of Agriculture, the Bachelor of Medicine and Bachelor of Surgery (M.B., B.S.), Doctor of Medicine (M.D.) and Master of Surgery (M.S.) in the Faculty of Medicine, the Bachelor of Veterinary Science and Animal Husbandry (B.V.Sc. & A.H.) in the Faculty of Veterinary Science and Animal Husbandry, and Bachelor of Science in Engineering [B.Sc. (Engg.)] in the Faculty of Engineering.

Admission to Examinations and Period of Study

Arts and Science

B.A. and B.Sc.—The courses of study for the Bachelor's degree (excluding the B.T. degree) in Arts or in Science extend over a period of two academic years, and examinations are conducted at the end of each year of the course. Candidates are admitted to the B.A. (Part I) or B.Sc. (Part I) Examination who have passed (i) the Intermediate Examination of the Board of High School and Intermediate Education, Uttar Pradesh or of the Central Board of Secondary Education, Ajmer or of the Madhya Bharat Secondary Education Board, Gwalior or of an Indian University incorporated by any law for the time being in force or (ii) the Higher School Certificate Examination conducted by the syndicate of the Cambridge University or (iii) the Intermediate Examination of the Travancore University or (iv) the Pre-Medical Examination of the Delhi University or (v) the Pre-Engineering Examination of the Delhi Polytechnic or (vi) General Certificate of Education Examination (Advanced) of London University and have attended a regular course of study in an affiliated college for one academical year. For admission to B.A. (Part II) or B.Sc. (Part II) Examination, candidates are required to attend a further regular course of study for one academical year in an affiliated College after passing the B.A. (Part I) or B.Sc. (Part I) Examination.

B.T.—Courses of study for the B.T. degree extend over a period of one academical year and only those candidates are admitted to the examination who, after taking the Bachelor's or Master's degree of this or some other recognized University, have completed a regular course of study in a college affiliated or recognised for the purpose by the University.

M.A. and M.Sc.—The courses of study for the Master's degree in Arts as well as in Science extend over a period of two years and there are two examinations, viz., the Previous Examination and the Final Examination. The Previous Examination is held at the end of the first year and only those candidates are allowed to appear at the examination who, after taking the Bachelor's degree of the University (in Arts, Science, Commerce or in Agriculture, as the case may be) or a corresponding

Bachelor's degree of an Indian University incorporated by any law for the time being in force have completed a regular course of study in an affiliated college for one academical year. A candidate is not admitted to the Final Examination for the degree of Master of Arts or of Master of Science, unless he has passed the Previous M.A. or M.Sc. Examination of the University, as the case may be, and has completed a regular course of study for one academical year in an affiliated college.

Ph.D.—The Ph.D. degree is awarded on the basis of research work extending over a period of two years carried on in a college affiliated to the University, a research institute, University, or a Government Department recognised for the purpose by the University under a supervisor to be nominated by the Executive Council. Only M.A.s, or M.Sc.s, M.Com.s or M.Sc. (Ag.)s, as the case may be, of this University or of any other University, recognised for this purpose by the Agra University, are qualified to carry on research work for the Ph.D. degree and must be of at least three years' standing before their thesis can be approved and the degree of Ph. D. conferred upon them.

D.Litt and D.Sc.—The degree of D.Litt. or D.Sc. is awarded on the basis of an original thesis upon any subject comprised within the Faculty concerned. Only Doctors of Philosophy of at least two years' standing can supplicate for the D.Litt. or D.Sc. degree. Master of Arts, or Master of Commerce, or Master of Science, or Master of Science in Agriculture of this or any other recognised University of at least five years' standing can also supplicate; provided the Research Degree Committee grants them exemption from the Ph.D. degree consequent to any work they may have published.

Bachelor of Science in Pharmaceutical Chemistry

B.Sc. (Pharm.)—Admission to the B.Sc. (Pharm.) Examination is granted to those who, after passing the Intermediate Examination of the Board of High School and Intermediate Education, Uttar Pradesh, or of an Indian University incorporated by any law for the time being in force, or an examination recognised by the University as equivalent thereto, with Chemistry, Physics and Biology, have attended a regular course of study in Pharmaceutical Chemistry in an affiliated college for two academical years.

Law

LL.B.—The examination for the degree of Bachelor of Laws consists of two parts: (1) The Previous Examination, and (2) the Final Examination. A candidate who, after taking the Bachelor's degree of the University or of an Indian University recognised for the purpose by the Executive Council of the University, completes a regular course of study in a law class in an affiliated college for one academical year, is eligible

for admission to the Previous Examination in Law. For admission to the Final Examination in Law, a candidate is required to put in another year in an affiliated college after passing the Previous Examination in Law of the University.

LL.M.—Candidates for the LL.M. Examination must have passed at least two years previously the examination for the degree of Bachelor of Laws of the University or of any other Indian University recognised for the purpose by the Executive Council and have completed a regular course in any affiliated college for one academic year in any of the sessions subsequent to his passing the Bachelor of Laws Examination.

Commerce

B.Com.—Admission to B.Com. Examination is granted to those who, after passing any of the following examinations, have prosecuted a regular course of study at a college affiliated to the University for the B.Com. degree :—

- (i) The Intermediate Examination of the Board of High School and Intermediate Education, U. P., or of an Indian University incorporated by any law for the time being in force.
- (ii) The Commercial Diploma Examination of the Allahabad University or of the Board of High School and Intermediate Education, U. P.
- (iii) The Intermediate Examination in Commerce of the Board of High School and Intermediate Education, United Provinces, or of the Central Board of Secondary Education, Ajmer.

Provided that the candidates who have passed the examinations mentioned in clauses (ii) and (iii) or any other examination conducted by any Indian University incorporated by any law for the time being in force, which may be recognised by the Executive Council as equivalent to any of the examinations mentioned in clauses (i) and (iii) above shall be exempted from taking the First Year Bachelor of Commerce course.

The regular course extends over a period of three years and the examinations are conducted at the end of the second and third years named as B.Com. (Part I) and B.Com. (Part II) Examinations respectively.

M.Com.—The courses of study for the Master's degree in Commerce extend over a period of two years and there are two examinations, viz., the Previous Examination and the Final Examination and only those candidates who, after taking their B.Com. degree of the University or of an Indian University recognised for the purpose by the Executive Council, have completed a regular course of study in an affiliated College for one academic year, are admitted to the Previous Examination for the

degree of Master of Commerce. The candidates who, after passing the Previous M.Com. Examination of the University, have completed a regular course of study for one academical year in an affiliated College, are admitted to the Final Examination for the degree of Master of Commerce.

Agriculture

B.Sc. (Ag.)—The courses for the B.Sc. (Ag.) degree extend over a period of two years, and examinations are conducted at the end of each year of the course. Admission to the B.Sc. (Ag.) Part I Examination is granted to those who, after passing the Intermediate Examination in Agriculture of the Board of High School and Intermediate Education, U.P., or any other examination in Agriculture recognised by the University as equivalent thereto, have attended a regular course of study in an affiliated college for one academical year. For admission to the B.Sc. (Ag.) Part II Examination, candidates are required to attend a further regular course of study for one year in an affiliated college, after passing the Part I examination.

M.Sc. (Ag.)—The courses of study for the Master's degree in Agriculture extend over a period of two years and there are two examinations i.e. the M.Sc. (Ag.) Previous and M.Sc. (Ag.) Final Examination. Only those candidates who, after obtaining the B.Sc. (Ag.) degree of the University, have completed a regular course of study for one academic year in an affiliated college recognised for this degree, are admitted to the Previous examination for the degree of Master of Science in Agriculture. For admission to the M.Sc. (Ag.) Final Examination, candidates have to attend a regular course of study for one more year after passing the M.Sc. (Ag.) Previous Examination. B.Sc. (Ag.)s of other Universities recognised by the Executive Council for the purpose may be admitted to the M.Sc. (Ag.) Previous Examination and thereafter to the M.Sc. (Ag.) Final Examination.

Medicine

The examination for the degree of M.B.B.S consists of four examinations :

- (1) The First M.B.B.S. Examination ;
 - (2) The Second M.B.B.S. Examination ;
 - (3) The Final M.B.B.S. Examination (Part I)
- and
- (4) The Final M.B.B.S. Examination (Part II).

which are held twice a year ordinarily in March-April and July, on such dates as the Executive Council from time to time determines.

A candidate, who after passing the Intermediate Examination of the Board of High School and Intermediate Education, U.P., or the Central Board of Secondary Education, Ajmer with Physics, Chemistry (including Organic Chemistry) and Biology, or of an Indian University incorporated by any law for the time being in force, with the same group of subjects as mentioned above, or any other examination recognised by the University as equivalent thereto, has attended a regular course of study in an affiliated college, for two academic years and has completed the age of 17 years at the time of admission or would complete this age within four months of his admission to the Medical College, shall be eligible for appearing at the First M.B., B.S. Examination

A candidate who, after passing the First M.B., B.S. Examination of the University has attended a regular course of study in an affiliated college for one academic year, shall be eligible for appearing at the Second M.B., B.S. Examination.

A candidate who, after passing the First M.B.B.S Examination, has for two years attended a regular course of study prescribed for the Final M.B., B.S. (Part I) and has passed Second M.B., B.S. Examination shall be eligible for appearing at the Final M.B., B.S. (Part I) Examination

A candidate who, after passing the First M.B., B.S. Examination, has attended for three years a regular course of study prescribed for the Final M.B., B.S. (Part II) Examination and who has passed the Second M.B., B.S. and Final M.B., B.S. (Part I) Examination shall be eligible for appearing at the Final M.B., B.S. (Part II) Examination.

M.D. and M.S.—Doctor of Medicine and Master of Surgery degrees are conferred after the acceptance of a thesis and an Examination (written, clinical, oral and practical). A candidate for the M.D. or M.S. degree must be an M.B., B.S. of the University and must have subsequent to graduation been engaged for three years in the practice of medical profession out of which one year must have been spent in hospitals as a houseman or clinical assistant and one year in the department of his special subject in the college hospital or institution recognised by the University for the purpose.

Engineering

B.Sc. (Engg.).—The courses of study for Bachelor of Science (Engineering) shall extend over a period of five years, the fifth year being devoted entirely to practical training or research work at places approved for the purpose by the Executive Council, on the recommendation of the Principal of an affiliated college.

At the end of each of the first four years there shall be an examination, viz. :—

At the end of the first year—

First Bachelor of Science (Engineering) Examination.

At the end of the second year—

Second Bachelor of Science (Engineering) Examination.

At the end of the third year—

Third Bachelor of Science (Engineering) Examination.

At the end of the fourth year—

Final Bachelor of Science (Engineering) Examination.

A candidate, who, after passing the Intermediate Examination with Mathematics, Physics and Chemistry of the Board of High School and Intermediate Education, U.P., or Central Board of Secondary Education, Ajmer, or of an Indian University incorporated by any law for the time being in force, or any other Examination, recognised by the Executive Council as equivalent thereto, has attended a regular course of study in an affiliated college for one academical year, shall be eligible for appearing at the First Bachelor of Science (Engineering) Examination.

A candidate who, after passing the First Bachelor of Science (Engineering) Examination of the University has attended a regular course of study in an affiliated college for one academical year, shall be eligible for appearing at the Second Bachelor of Science (Engineering) Examination.

A candidate who, after passing the Second Bachelor of Science (Engineering) Examination of the University, has attended a regular course in a particular branch of study, in an affiliated College for one academical year, shall be eligible for appearing at the Third Bachelor of Science (Engineering) Examination in that branch of study.

A candidate, who, after passing the Third Bachelor of Science (Engineering) Examination of the University in the particular branch of study, has attended a regular course of study in that branch of study in an affiliated college, for one academical year, shall be eligible for appearing at the Final Bachelor of Science (Engineering) Examination in that branch of study.

A candidate, who, after passing the Final Bachelor of Science (Engineering) Examination of the University in a prescribed branch of study, produces evidence to the satisfaction of the Executive Council, that he has successfully spent not less than 275 working days in practical or research work in workshops or institutions approved for the purpose

by the Executive Council, on the recommendation of the Principal of an affiliated college shall be admitted to the degree of Bachelor of Science (Engineering) in that branch of study.

A candidate, who has taken the B.Sc. degree of the University in Mechanical Engineering, or *vice versa*, a candidate who has taken the B.Sc. degree of the University in Electrical Engineering, may be admitted to the B.Sc. degree in Electrical Engineering or Mechanical Engineering provided he—

- (i) attends a regular course of study in an affiliated college of the University for the Final B.Sc. (Engg.) Examination in Electrical Engineering or Mechanical Engineering as the case may be ;
- and (ii) is successful at the Final B.Sc. (Engg.) Examination in that branch of study.

Veterinary Science and Animal Husbandry

The Examination for the degree of Veterinary Science and Animal Husbandry consists of four Examinations :

- (1) The First B.V.Sc. and A.H. Examination ;
- (2) The Second B.V.Sc. and A.H. Examination ;
- (3) The Third B.V.Sc. and A.H. Examination ;
- (4) The Final B.V.Sc. and A.H. Examination ;

which shall be held twice a year ordinarily in March April and July on such dates as the Executive Council may from time to time determine.

A candidate, who, after passing the Intermediate Examination of the Board of High School and Intermediate Education, U.P., with Physics, Chemistry (including Organic Chemistry) and Biology, or of an Indian University or Board incorporated by any law for the time being in force, with the same group of subjects as mentioned above, or any other Examination recognised by the University as equivalent thereto, has attended a regular course of study in an affiliated college for one academic year, shall be eligible for appearing at the First B.V.Sc. and A.H. Examination.

A candidate, who, after passing the First B.V.Sc. and A.H. Examination of the University has attended a regular course of study in an affiliated college for one academic year shall be eligible for appearing at the Second B.V.Sc. and A.H. Examination.

A candidate, who, after passing the Second B.V.Sc. and A.H. Examination of the University, has attended a regular course of study in an

affiliated college for one academic year, shall be eligible for appearing at the third B.V.Sc. and A.H. Examination.

A candidate, who, after passing the Third B.V.Sc. and A.H. Examination of the University, has attended a regular course of study in an affiliated college for one academic year, shall be eligible for appearing at the Final B.V.Sc. and A.H. Examination.

Subjects and Papers for the Examinations and Scale of Marks

Bachelor of Arts (Parts I and II).—Candidates are examined in General English and any *three* of the following subjects: (a) English Literature, (b) Latin, Greek, Hebrew, Arabic, Persian or Sanskrit, (c) Hindi, Urdu, Marathi, Gujrati, Bengali, French, German or Italian, (d) Mathematics, (e) Philosophy, (f) Economics, (g) History, (h) Political Science, (i) Geography, (j) Indian Music (Vocal or Instrumental), (k) Drawing and Painting, (l) Home Science, (m) Sociology, (n) Military Science, (o) Psychology, (p) Education, and (q) Home Economics. The Examination in General English consists of one paper. Two papers are set in each of the other subjects except Indian Music and Military Science. The examination in Indian Music consists of one paper and one practical of 70 marks, while in Military Science it consists of two papers only but there is one practical of 40 marks in B.A. (Part II) Examination only

The minimum for pass in all subjects is 33 per cent. There are three divisions. Candidates are declared to have passed in the First division if they obtain 60 per cent or more of the aggregate; in the Second, if they obtain 45 per cent or more, and in the Third if they obtain the minimum pass marks in each subject.

All candidates are required to pass in a Compulsory General Hindi Paper of 50 marks (the pass marks being 13); provided that candidates who have passed the High School or Intermediate or Senior Cambridge Examination with Advanced Hindi or who offer Hindi as one of their optional subjects for the B.A. examination are exempted from appearing in this paper.

Master of Arts.—A candidate may select *one* of the following subjects: (1) Languages: English, Sanskrit, Persian, Latin, Urdu, Hindi or Marathi, (2) Mental and Moral Science, (3) History, (4) Mathematics, (5) Economics, (6) Political Science, (7) Geography, (8) Diplomacy and International Affairs, (9) Sociology, and (10) Ancient Indian History and Culture.

At the Previous Examination, there are *four* papers in Sanskrit, Persian, Hindi, Urdu, Marathi, Mathematics, Economics, Geography and

Sociology and *three* papers in English Literature, Latin, History, Political Science, Mental and Moral Science, Philosophy, Psychology and Ancient Indian History and Culture. For the Final Examination *four* papers are set in English Literature, Persian, Sanskrit, Hindi, Urdu, Marathi, Mathematics, Economics, Mental and Moral Science, Philosophy, History, Political Science, Psychology and Ancient Indian History and Culture, and *three* papers in Latin. There is a *viva voce* Examination in English Literature and Modern European Languages.

The minimum pass marks in all the subjects are 36 per cent of the aggregate marks. Candidates who obtain 60 per cent or more of the aggregate are placed in the First Division and those who obtain 48 per cent or more in the Second Division and the rest in the Third Division.

Bachelor of Science—Candidates are examined in any *three* of the following subjects :

Physics, Chemistry, Mathematics, Botany, Zoology, Economics, Military Science, Geology, Pharmaceutical Chemistry and Statistics :

Provided that no candidate shall be allowed to take any subject except Economics, Military Science, Geology, Pharmaceutical Chemistry and Statistics, unless he has passed an examination in the corresponding subject in the Intermediate or any other examination recognised as qualifying for admission to a degree course.

Provided further that the combination of Economics, Mathematics and Military Science shall not be allowed.

There are two papers and a practical examination in each subject except Mathematics and Economics in which two papers are set.

A candidate may, at his option, take General English or General Hindi as an extra subject.

The minimum for a pass in all subjects is 33 per cent. There are three divisions : The First Division consists of those who obtain 60 per cent or more of the aggregate, the Second of those who obtain 45 per cent or more, and the Third of those who obtain the minimum pass marks in each subject.

Master of Science.—Candidates must offer one of the following subjects :—(a) Mathematics, (b) Physics, (c) Chemistry, (d) Botany, (e) Zoology, and (f) Statistics. At the Previous Examination there are three papers and a practical examination in Physics, Botany, Zoology and Chemistry. In Mathematics and Statistics the examination consists of four papers. At the Final examination four papers are set in Mathematics, three papers in Zoology, Physics and Statistics, and two papers

and a thesis in Chemistry and three papers or a thesis in lieu of the third paper in Botany with a practical examination in each subject except Mathematics.

The minimum for a pass is 36 per cent in each subject. 60 per cent or more of the aggregate places a candidate in the First Class and 48 per cent or more, in the Second Class and the rest in the Third Class.

A candidate is required to pass in the written and the practical examinations separately.

Professional Examinations

Bachelor of Teaching.—Every candidate shall be required to show a competent knowledge of the following :—

- (1) Principles and Psychology of Education
- (2) School Organisation and Hygiene
- (3) Methods of teaching : (a) General Methods ; (b) Methods of Teaching School subjects
- (4) History of Education
- (5) Practical skill in Teaching

The minimum for a pass is 36 per cent with a minimum of 25 per cent in each paper ; 60 per cent or more of the aggregate places a candidate in the First Division and 48 per cent or more in the Second Division and the rest in the Third Division.

Bachelor of Science in Pharmaceutical Chemistry.—The following are the subjects of study : (1) Pharmaceutical Chemistry, (2) Pharmacy, (3) Pharmacognosy, and (4) Elementary Human Physiology and Pharmacodynamics.

The examination is conducted by means of papers, but candidates are required to undergo a practical examination in each subject and to pass separately in that examination.

The minimum for a pass in each subject is 33 per cent. There are three divisions : The First Division consists of those who obtain 60 per cent or more of the aggregate marks, the Second of those who obtain 45 per cent or more and the Third of those who obtain the minimum pass marks in each subject.

Candidates may, at their option, also take General English or Military Science, or both as extra subjects.

Bachelor of Laws.—The subjects of the Previous Examination are : (1) Roman Law, (2) The Law of Contracts, (3) The Law of Easements

and Torts, (4) The Law of Evidence, (5) Criminal Law and Procedure, (6) Constitutional Law, and (7) Jurisprudence. The following are the subjects for the Final Examination: (i) Civil Procedure, (ii) The Law relating to the Land Tenures, Rent and Revenue in Uttar Pradesh or Madhya Pradesh or Madhya Bharat or Vindhya Pradesh or Ajmer or Bhopal, (iii) Hindu Law, (iv) Mohammedan Law, (v) The Law relating to Transfer of Property, (vi) Equity with special reference to the Law of Trusts and Specific Relief, and (vii) Company Law and Income-tax Law.

The examination is conducted by papers. The minimum for a pass is 48 per cent of the aggregate with a minimum of 36 per cent in each paper. Those who obtain 60 per cent of the aggregate are placed in the First Class and the rest in the Second Class.

Master of Laws.—Candidates for the degree of Master of Laws shall be examined in the following compulsory subjects, with such combination for the two optional subjects as an intending candidate adopts:—

Compulsory Subjects

- I. Jurisprudence and Principles of Legislation
- II. Constitutional Law, British and Indian
- III. Roman Law
- IV. Either (a) Hindu Law,
or (b) Mohammedan Law.

Optional Subjects

Only two out of these may be taken:—

- I. Hindu or Mohammedan Law, whichever is not chosen as a compulsory subject
- II. The Law of Contracts
- III. Transfer of Immovable Property and Easements
- IV. Equity
- V. International Law, Public and Private
- VI. Wills and Administrations

There shall be assigned to each paper 100 marks. Candidates who obtain not less than 50 per cent of the marks assigned to each paper and not less than 60 per cent of the aggregate shall be declared to have passed the examination. There shall be no Class.

Bachelor of Commerce (Part I and Part II).—The following subjects are to be studied in the first year class : (1) English, (2) Elements of Economics, (3) Elements of Currency and Banking, (4) Book Keeping and Accountancy, (5) Business Methods, and (6) Economic and Commercial Geography. The compulsory subjects to be studied in the B. Com. Part I and Part II classes are :

Part I.—(1) English Text and Unseen, (2) Hindi Essay and Unseen, (3) Business Organisation, (4) Commercial Law, (5) Accountancy, (6) Principles of Economics, (7) Currency and Banking, (8) Trade and Transport and Precise Writing.

Part II.—(1) English Text and Unseen, (2) Essay and Precise Writing, (3) Industrial Organisation, (4) Statistics, (5) Public Finance, (6) Economic Development in India and

Any one of the following subjects may be offered as an optional subject :—

- (a) Advanced Accountancy and Auditing, (b) Advanced Banking, (c) Study of India's Trade with South Asiatic Countries, viz., South Africa, Indonesia and Japan, (d) Economic and Commercial Geography, (e) Secretarial Practice, (f) Actuarial Science.

The minimum for a pass is 36 per cent in each subject or group of subjects. Marks of Part I and Part II Examinations count together for a place on the pass list of Part II Examination. Candidates who secure 60 per cent or more of the aggregate are placed in the First Division, those who get 48 per cent or more, in the Second Division.

Master of Commerce.—Each paper shall carry 100 marks. For both the Previous and the Final Examinations, candidates must obtain for a pass at least 36 per cent of the aggregate marks. The marks of the Previous and Final Examinations will count together for a place on the pass list of the Final Examination. Successful candidates securing 60 per cent or more of the aggregate marks will be placed in First Division, 48 or more per cent in Second Division and the rest in the Third Division.

Group A (Compulsory)

Paper I.—Organisation and Finance of Industries.

„ *II.*—Banking and Foreign Exchange.

„ *III.*—Company Law and Secretarial Work.

N.B.—Out of the above any one may be taken in the Previous and the remaining two in the Final.

*Group B (Optional)**Paper I.—Organisation of Markets.*

- „ *II.—Banking and Foreign Exchange.*
- „ *III.—International Trade and Fiscal Policy.*
- „ *IV.—Transport.*
- „ *V.—Cost Accounts.*
- „ *VI.—Labour Problems.*
- „ *VII.—Statistics.*
- „ *VIII.—Co-operation.*
- „ *IX.—Rural Economics.*
- „ *X.—Income Tax Law and Accounts.*
- „ *XI.—Economic Development of U.K., U.S.A., U.S.S.R. and Japan.*
- „ *XII.—Insurance and Actuarial Science.*
- „ *XIII —Corporation Finance.*

N.B—Any three of the above to be taken in the Previous and two of the remaining in the Final

Bachelor of Science in Agriculture (Part I and Part II).—Crops and Cropping Scheme; Internal Morphology, Crop Systematics and Physiology; Soils, Plant Chemistry, Fertilizers and Manures; Agricultural Entomology; Plant Pathology including Bacteriology; Animal Husbandry and Veterinary Science; Agricultural Economics; Farm Management, Soil Management and Field Experimentation; Farm Machinery; Dairying; Horticulture; Genetics and Plant Breeding; Dairy Chemistry and Animal Nutrition; Agricultural Extension.

There are seven papers and seven practical examination in Part I Examination and seven papers and seven practical examinations in Part II Examination.

A candidate is required to pass in each paper, as well as in each practical examination. There are three divisions: The First Division consists of those who obtain 60 per cent or more of the aggregate, the Second of those who obtain 45 per cent or more, and the Third of those who obtain minimum pass marks.

Master of Science in Agriculture.—The examination for the degree of Master of Science in Agriculture shall consist of two Examinations, Previous and Final.

A candidate is required to pass in the written and the practical examinations separately. There are three papers and one practical in each subject and in each year except for the Final Examination where there is a choice for a Thesis.

The subjects for the Previous and Final examinations shall be *one* of the following :—

- (1) Agronomy
- (2) Agricultural Economics
- (3) Animal Husbandry and Dairying
- (4) Agricultural Chemistry
- (5) Plant Pathology
- (6) Horticulture
- (7) Agricultural Botany
- (8) Agricultural Zoology—Entomology

There are three divisions.—First Division 60 per cent, Second Division 48 per cent, and Third Division 36 per cent.

Bachelor of Medicine and Bachelor of Surgery.—For the First M.B. B.S. Examination, candidates are required to pass in (1) Anatomy and (2) Physiology; for the Second M.B., B.S. Examination in Pharmacology and Materia Medica, for the Final M.B.B.S. (Part I) Examination in (1) Pathology and Bacteriology, (2) Hygiene and Public Health, (3) Medical Jurisprudence and Toxicology, and for the Final M.B., B.S. (Part II) Examination in (1) Medicine, (2) Surgery, (3) Obstetrics and Gynaecology, and (4) Ophthalmology.

Minimum pass marks in each subject are 50 per cent in theory and 50 per cent in practicals.

Candidates obtaining 75 per cent or more of the marks in a subject in the first attempt shall be deemed to have obtained distinction in that subject.

M.D. and M.S.—A candidate has to take *one* of the following subjects with three papers and a practical in each :—

For M.D.—1. Medicine, 2. Pathology, 3. Pharmacology, and 4. Physiology.

For M.S.—1. Surgery, 2. Ophthalmology, 3. Obstetrics and Gynaecology, and 4. Anatomy.

No marks will be assigned. The fitness of a candidate for the M.D. or M.S. degree will be determined by the examiners.

Bachelor of Science in Engineering.—The examination shall be conducted by means of written papers and practical and oral tests and shall also include certified sessional work done in the college, laboratories

and workshops. Every candidate for the First Bachelor of Science (Engineering) Examination shall be required to show a competent knowledge of:—

- (1) Mathematics, Pure and Applied
- (2) Applied Chemistry
- (3) Applied Physics
- (4) Applied Mechanics
- (5) Surveying
- (6) Building Materials and Building Construction
- (7) Machine Drawing
- (8) Practical Geometry and Graphic Statics
- (9) Heat Engines

Every candidate for the Second Bachelor of Science (Engineering) Examination shall be required to show a competent knowledge of:—

- (1) Mathematics, Pure and Applied
- (2) Applied Mechanics
- (3) Heat Engines
- (4) Electrical Engineering
- (5) Machine Drawing
- (6) Graphics and Structural Drawing

There shall be the following branches of study for the Third and Final Bachelor of Science (Engineering) Examinations:—

- A. Mechanical Engineering;
- B. Electrical Engineering;

and a candidate for the Bachelor of Science (Engineering) degree shall be required to specialise only in one such branch of study at a time.

Every candidate for the Third Bachelor of Science (Engineering) Examination in Mechanical Engineering shall be required to show a competent knowledge of:—

- (1) Strength and Elasticity of Materials
- (2) Theory of Structures
- (3) Theory of Machines
- (4) Hydraulics and Hydraulic Machinery
- (5) Heat Engines
- (6) Mechanical Engineering Design
- (7) Electrical Engineering

Every candidate for the Third Bachelor of Science (Engineering) Examination in Electrical Engineering shall be required to show a competent knowledge of :—

- (1) Strength and Elasticity of Materials
- (2) Theory of Structures
- (3) Theory of Machines
- (4) Hydraulics and Hydraulic Machinery
- (5) Heat Engines
- (6) Electrical Engineering
- (7) Theory and Design of Electrical Machinery

Every candidate for the Final Bachelor of Science (Engineering) Examination in Mechanical Engineering shall be required to show a competent knowledge of :—

- (1) Strength and Elasticity of Materials
- (2) Theory of Structures
- (3) Hydraulics and Water Power Engineering
- (4) Theory and Design of Machinery
- (5) Heat Engines
- (6) Workshop Technology and Engineering Production
- (7) Industrial Organisation and Works Management

Every candidate for the Final Bachelor of Science (Engineering) Examination in Electrical Engineering shall be required to show a competent knowledge of :—

- (1) Electrical Communications or Utilization of Electric Power with Traction
- (2) Hydraulics and Water Power Engineering
- (3) Generation, Transmission and Distribution of Electric Power
- (4) Theory and Design of Electrical Machinery
- (5) Workshop Technology and Engineering Production
- (6) Industrial Organisation and Works Management

For a pass in each of the Engineering examinations, a candidate must obtain at least—

35 per cent marks in each paper.

40 per cent marks in each Group (except in Final Examination in which a candidate must obtain 40 per cent of the total of all the written papers combined).

50 per cent marks in each practical.

50 per cent marks in the aggregate.

For purpose of classification of the award of the Final degree the following shall be taken into account—

20 per cent marks obtained in the First Examination.

35 per cent marks obtained in the Second Examination

50 per cent marks obtained in the Third Examination.

100 per cent marks obtained in the Final Examination.

NOTE.—For this purpose only the marks obtained at the main (March/April) Examination shall be considered (Res. No. 407 of April 25, 1953).

A candidate shall be awarded a degree with honours if he secures 80 per cent, a degree in first class if he secures 65 per cent and a degree in second class if he secures 50 per cent of the grand total.

No division will be assigned to a candidate passing the Final Examination as a result of Supplementary Examination.

Bachelor of Veterinary Science and Animal Husbandry.—For the First B.V.Sc. & A.H. Examination—Candidates are required to pass (1) Anatomy Part I, (2) Physiology Part I, and (3) Animal Husbandry Part I and Part II (with one paper and an oral and practical examination in each).

For the Second B.V.Sc. & A.H. Examination in (1) Anatomy Part II, (2) Physiology Part II, (3) *Materia Medica*, (4) Pathology, and Bacteriology and Immunology Part I (with one paper and an oral and practical examination in each).

For the Third B.V.Sc. Examination in (1) Parasitology, (2) Animal Husbandry Part III, (3) Pathology etc. Part II, and (4) Medicine Part I (with one paper and an oral and practical examination in each).

For the Final B.V.Sc. and A.H. Examination in (1) Animal Husbandry Part IV (with one paper oral and practical), (2) Medicine Part II, (3) Surgery (with one paper and an oral), and (4) Farm Practice and Live-stock Economics and Statistics (with one paper only).

For all the examinations, candidates must obtain for a pass at least 45 per cent of the aggregate marks separately in written and oral, practical or clinical examination in each subject.

If a candidate obtains an aggregate of 75% in a subject he will be declared to have passed with distinction in that subject. Only those candidates will be considered qualified for distinction who pass the examination in the first attempt.

Conditions of Re-Admission to University Examinations

A candidate who has attended a regular course of study prescribed for an examination in an affiliated college of the University and who has failed once, or who, in the case of Final M.A. or M.Sc. or M.Com. or LL.B. or M.Sc. (Ag.) or First or Second or Final M.B., B.S. (Part I or II) or First, Second, Third and Final B.V.Sc. and A.H. Examination has not been able to appear at the said examination on account of serious illness, may be allowed by the Executive Council to appear again at a subsequent examination without attending any further regular course of study; provided the Principal of the affiliated college in which he last studied, recommends his application, which in the case of candidate's serious illness, shall be accompanied by a Medical Certificate.

A candidate who has passed in theory but has failed in practice at the B.T. Examination may be allowed by the Executive Council to appear, without attending any further course of study, in any subsequent examination in practice, held within a period of three years from the date of his first appearance at the examination; provided he continued to be a teacher in a recognised school.

A candidate who has passed in practice but has failed in theory at the B.T. Examination may be allowed by the Executive Council to appear, without attending any further course of study, in any subsequent examination in theory, held within a period of three years from the date of his first appearance at the examination.

A candidate who has failed at the Final B.Sc. (Engg.) Examination may be allowed to appear as an ex-student at any subsequent examination within a period of three years after his first appearance at the examination without attending a regular course of study.

There shall be a Supplementary examination in July of candidates who fail in one subject only at the immediately preceding B.A., B.Sc., B.Com., B.Sc. (Ag.) Part I or II or any of the B.V.Sc. and A.H. or B.Sc. (Engg.) Examination and such candidates as may desire to take the supplementary examination may be provisionally permitted at their own risk to join the next higher class in an affiliated college of the University and count attendance in case they are successful at the supplementary examination; provided that for an examination in the Faculty of Engineering, each Group of written papers or the practical or sessional work in any subject, shall be counted as one subject for purposes of this Ordinance and only such students as have obtained 55 per cent of the aggregate number of marks for the examination and not less than 25 per cent of the marks in the group in which they have failed shall be admitted to the supplementary examination. Candidates shall be declared to have passed the examination if they secure minimum pass marks prescribed for a pass in the

subject in which they appear at the supplementary examination. No division shall, however, be awarded to such candidates.

In the case of subjects in which there is also practical test, candidates shall be required to appear in the written papers only, if they passed at the main examination in practicals and in practicals only if they passed in the written papers. Candidates who failed both in written papers and practicals shall be examined in both the parts of the subject; provided that candidates failing in any of the B.V.Sc. and A.H. Examinations either in theory or practical or both shall have to appear and pass in both the theory and practical.

There shall be a supplementary examination in July for LL.B. (Previous and Final) candidates who fail at the immediately preceding examination in one paper only obtaining not less than 30 per cent marks in that paper and 48 per cent or more marks in the aggregate, or who pass in all papers but fail in the aggregate only by not more than ten marks. Candidates failing in one paper only shall be required to appear in the paper in which they failed and those who failed in the aggregate in those papers only in which they secured less than 60 per cent marks. Candidates shall be declared to have passed the examination if they secure at the supplementary examination 36 per cent marks in the paper in which they failed, or 36 per cent marks in each paper and 48 per cent marks in the aggregate, if they failed in the aggregate only. No division shall be assigned to such candidates. Such candidates as may desire to take the supplementary Examination in LL.B. (Previous) Examination may be provisionally permitted at their own risk to join the LL.B. Final class in an affiliated college of the University and count attendance in case they are successful at the supplementary examination.

A candidate who desires to enter for an examination under this Ordinance must submit his application direct to the Registrar in a prescribed form so as to reach him not later than the 1st of July each year. The application shall be accompanied by the prescribed fee for examination and the marks fee.

Admission of Teachers, Inspectors in the Educational Department and Women Candidates to the Examinations of the University

A teacher in an approved educational institution or an Inspecting Officer in the Departments of Education in U.P., or Madhya Bharat, Bhopal, Vindhya Pradesh or Ajmer or Nepal Government is also eligible for admission to University examinations if he has served continuously as a teacher or an Inspector for one academic year immediately preceding the examination and if he fulfils certain other special conditions.

Women candidates residing within the territorial limits of the University are allowed to appear at the examinations of the University except the B.T., B.Sc., M.Sc. (Physics, Chemistry, Botany, Zoology and Statistics), B.Sc. (Ag.), M.Sc. (Ag.), M.B., B.S., B.Sc. (Engg.), B.V.Sc. & A.H. Examinations, without attending a regular course of study in an affiliated college.

Number of Students in the University

The number of students in the degree and post-graduate classes in the affiliated colleges of the University during the session 1954-55 was as follows :—

Arts and Science classes	.	.	.	44,496
Law classes	..	..	.	4,675
Commerce classes	.	..	.	5,118
Agriculture classes	.	..	..	601
Medicine classes	..	..	..	849
V.Sc. & A.H. classes	..	.	.	230
Engineering classes	.	.	..	192

Residence and Health

The students of the University are required to live either in a hostel or with their parents or guardians. The cost of living and the conditions of residence are different in different places, the details of which will be found in the prospectuses of the different colleges issued by the colleges every year.

The Executive Council is responsible for the periodical inspection of the hostels and every college is required to satisfy the Executive Council that the arrangements for the residence of students are satisfactory and that provision is made for the health and recreation of students.

National Cadet Corps

The University Officers' Training Corps, I.T.F. has been disbanded from July, 1946 and in its place the National Cadet Corps is raised with a separate Directorate of its own under the Defence Ministry of India, New Delhi, by an Act of the Government of India called the National Cadet Corps Act, 1948. The distribution of this corps in the University is as follows :—

3rd U. P. Bn. N. C. C., Agra—2 Companies—Agra, St. John's and B. R. Colleges.

4th U. P. Bn. N. C. C., Kanpur—2 Companies—D. A. V., Christ Church, V. S. S. D. and Agricultural Colleges.

5th U. P. Bn. N. C. C., Bareilly—2 Companies—"A" Coy., Bareilly College, and "B" Coy.—D.S. College and Aligarh University, Aligarh.

Meerut Independent Company—I Company—Meerut College.

V. P. Ind. Co., 1 Company—Durbar College, Rewa.

Ajmer Ind. Co., 1 Company—Govt. & D.A.V. Colleges, Ajmer.

Gwalior Ind. Co., 1 Company—Victoria College, Gwalior.

Muzaffarnagar Ind. Co., 1 Company—D.A.V. College, Muzaffarnagar.

Scholarships and Medals

There is a large number of scholarships and freeships and medals awarded by each of the affiliated colleges of the University to its own students, the details of which can be had from the prospectuses of the respective colleges.

Besides the scholarships awarded by the affiliated colleges, the University has instituted ten research scholarships of Rs. 75 per mensem each tenable for twelve months in affiliated colleges and the following post-graduate scholarships of Rs. 30 per mensem each to be awarded annually (each scholarship being tenable for twenty months) for precedence in the First or Second Division on the results of the degree examination concerned :—

- (1) Ten M.A. Scholarships on the results of the B.A. Examination.
- (2) Ten M.Sc. Scholarships on the results of the B.Sc. Examination.
- (3) Five M.Com. Scholarships on the results of the B.Com. Examination.
- (4) Five M.Sc. (Ag.) Scholarships on the results of the B.Sc. (Ag.) Examination.

In addition to these scholarships there is also one endowed scholarship of Rs. 13 p.m. tenable for 22 months. The Scholarship is awarded to a poor and deserving student who joins the University for the Bachelor's degree in any of the Faculties out of the interest of the donation of Rs. 4,607-2-6 bequeathed by the late Mr. Govind Das Gupta, a clerk in the Loco and Carriage Department of the B.B. & C.I. Railway, Ajmer, and is known as "Govind Das Gupta Scholarship."

The University has got fourteen endowed medals at present :—

1. *T.C. Jones Gold Medal* endowed by the Agra College Staff Club in memory of Mr. T. C. Jones, the late Principal of the Agra College, to be awarded annually at the time of Convocation to the student who stands first in English in the B.A. Examination of the University.

2. *Krishna Kumari Devi Gold Medal* endowed by Dr. Ganesh Prasad in memory of his daughter Krishna Kumari Devi to be awarded to the candidate in the Faculties of Arts and Science who obtains the highest percentage of marks in the Final Examination for the degree

3. *Krishna Kumari Devi Mathematics Gold Medal* endowed by Dr. Ganesh Prasad in memory of his daughter to be awarded annually to that candidate who obtains the highest percentage of marks in the Final Examination for the Master's degree in Mathematics; provided that he secures at least 60 per cent of the marks in the aggregate.

4. *Seshadri Gold Medal* endowed by Mr. P. Seshadri, M.A., O.B.E., Pincipal, Government College, Ajmer, to be awarded annually to the candidate who obtains the highest percentage of marks in English Literature in the Final M.A. Examination.

5. *Shrimati Umang Lakshmi Kanti Lal Pandya Gold Medal* endowed by Dr. K. C. Pandya, Professor of Chemistry, St. John's College, Agra, in memory of his wife Shrimati Umang Lakshmi to be awarded annually to the candidate who passes the B.Sc. Examination with the highest marks in Chemistry.

6. *Azizuddin Malcolm Hailey Gold Medal* endowed by K. B. Kazi Sir Azizuddin Ahmad, Dewan, Datia State, to be awarded annually to the candidate who obtains the highest percentage of marks either in Sanskrit or in Persian (in alternate years) in the B.A. Examination.

7. *Nitkishore Mehra-Durrant-Haythornthwaite Silver Medal* endowed by Rai Sahib Nitkishore Mehra, B.A., LL.B., Advocate, Agra, to be awarded annually to that candidate who obtains the highest percentage of marks in Criminal Law at the LL.B. (Previous) Examination.

8. *Shyama Charan Gold Medal* endowed by (Mrs.) Prem Mohini Shyama Charan, in memory of her late husband, Professor Shyama Charan of Agra College, Agra, to be awarded annually to the candidate who obtains the highest number of marks in Mathematics, at the B.A. or B.Sc. Examination.

9. *Shrimati Dhan Devi Kapoor Silver Medal* endowed by B. Chhail Behari Kapoor, Advocate, Bareilly, in memory of his wife to be awarded annually to the candidate who obtains the highest (but not less than a 1st class) marks in Hindi at the B.A. Examination.

10. *Sukh Nandan Gupta Silver Medal* endowed by Mr. Sukh Nandan Gupta, B.Com., G.D.A., R.A.K., Registered Accountant, Agra, to be awarded annually to the student getting the highest percentage of marks in Accountancy and Auditing at the B.Com. Examination.

11. *Buckley Gold Medal* endowed by the members of the staff of Medical College, Agra, to be awarded annually to the best graduate who obtains the highest number of marks in the final M.B., B.S. (Part II) Examination of the University in April. The recipient should pass in five years without failing in any University Examination of the Faculty of Medicine previously.

12. *Rameshwar Prasad Bagla Gold Medal* endowed by Messrs. Gangadhar Baijnath, Bankers and Mill Owners, Kanpur, to be awarded each year to the student standing first in the LL.B. (Final) Examination of the University.

13. *Kaushla Nandan Sahay Silver Medal* endowed by Mrs. S. Rai, Member, Agra University Senate, in memory of her revered father, the late Dr. Kaushla Nandan Sahay, B.A., M.B., of Bareilly to be awarded annually to the candidate who obtains the highest number of marks in Ophthalmology in the M.B., B.S. Examination.

14. *Munshi Ram Sharma Gold Medal* endowed by Dr. Munshi Ram Sharma, Professor of Hindi, D.A.V. College, Kanpur, to be awarded annually to the candidate who obtains the highest number of marks at the M.A. examination in Hindi.

Examinations held in April, 1955

The following Examinations of the University were held in March-April, 1955 :—

	Examination					No. of candidates registered
B.A. (Part I)	8,805
B.A.	17,290
M.A. (Previous)	6,590
M.A. (Final)	3,254
B.Sc. (Part I)	2,876
B.Sc.	3,809
M.Sc. (Previous)	846
M.Sc. (Final)	561
LL.B. (Previous)	3,255
LL.B. (Final)	1,417

Examination	No. of candidates registered
B.Com. (Part I)	2,581
B.Com. (Part II)	1,734
M.Com. (Previous)	431
M.Com. (Final)	372
B.Sc. (Ag.) (Part I)	188
B.Sc. (Ag.) (Part II)	288
M.Sc. (Ag.) (Previous)	101
M.Sc. (Ag.) (Final)	84
First M.B., B.S.	188
Second M.B., B.S.	185
M.B., B.S. Final Part I	197
M.B., B.S. Final Part II	215
First B.V.Sc. & A.H.	113
Second B.V.Sc. & A.H.	78
Final B.V.Sc. & A.H.	39
B.T.	451
B.Sc. (Engg.) Previous Part I	67
B.Sc. (Engg.) Previous Part II	38
B.Sc. (Engg.) Final Part I	54
B.Sc. (Engg.) Final Part II	37
LL.M.	1
M.D.	21
M.S.	40
D.C.H.	3
Total	56,209

Budget : Provident Fund

The year under report, 1954-55 commenced with a credit balance of Rs. 3,68,366, which included a sum of Rs. 1,75,488 on account of certain liabilities.

The income during the year was Rs. 26,54,762, including Rs. 19,00,660 from Enrolment, Permission, Examination and marks Fees; Rs. 40,800 on account of contributions from non-U.P. colleges and Rs. 1,83,828 on account of Government grant (block grant Rs. 46,925 and special grant Rs. 32,761-5-0—Rs. 31,000 for bursaries and book grants and Rs. 1,761-5-0

for Research Scholars from Union Government. The Expenditure during the year was Rs. 24,51,046. The year thus closed with a credit balance of Rs. 5,72,082. In addition to this, University had :—

- (i) In its General Reserve Fund (including Gwalior Durbar Conditional Donation of Rs. 15,000) 4 per cent and 3 per cent G.P. notes of the face value of Rs. 2,08,000.
- (ii) A sum of Rs. 4,22,713 in the Library Reserve in fixed deposit 3 per cent G.P. notes, saving bank account, National Plan loan N.S.Cs. and in Current account.
- (iii) A sum of Rs. 3,890-10-0 held in deposit with the Agra Electric Supply Co. Ltd., Agra (Rs. 3,790-10-0) and Municipal Board, Agra (Rs. 100) as Security deposits.
- (iv) Rs. 550 in the Imprest Accounts, Rs. 500 with the Registrar and Rs. 50 with the Vice-Chancellor.
- (v) A sum of Rs. 5,14,959 in National Plan loan and Current Account in treasury deposit certificate, N.S.Cs., in Research Department Fund.
- (vi) A sum of Rs. 50,000 placed with Kapur Printing Press, Proprietor, Agra University Press, according to the terms of the contract at 6 per cent per annum interest.
- (vii) Rs. 8,649 due from various institutions.

The University has a Provident Fund to which every servant of the University is compelled to subscribe at the rate of 8 per cent of his salary per month with option to subscribe upto 15½ per cent at the request of the subscriber, the University contributing at the rate of 12 per cent in the case of subscribers drawing a salary of Rs. 500 or less, 10 per cent in the case of subscribers drawing a salary of more than Rs. 500 but not exceeding Rs. 1,000, and 8 per cent in the case of subscribers drawing a salary of over Rs. 1,000.

Recognition of Degrees of this University by Foreign Universities and other bodies

(A)—Foreign Universities

1. *Cambridge University*.—The Cambridge University has approved the Agra University for the purpose of exemption from the Previous Examination by Indian certificates; and a B.A. or B.Sc. of the Agra University, who has secured a first or a second division at the examination can be exempted from the Previous Examination of the Cambridge University, provided that he has passed the B.A. or B.Sc. Examination with English and (a) Arabic, Persian, or Sanskrit, or (b) Mathematics

or Science. (*vide* letter No. H. 172476, dated May 29, 1928, from the Registrar of the University of Cambridge.)

2. Further the University of Cambridge recognised Agra University as an associate institution. (*Vide* letter No. H/3/1671 of 27th January. 1934.)

3. *Oxford University*.—The B.A. and B.Sc. Degrees of the Agra University have been approved by the Hebdomadal Council of the University of Oxford for the purpose of Statute Title VI, Section 1, class 2 H; and a B.A. or B.Sc. of the Agra University is qualified for exemption from Responsions, provided he produces evidence that his course at the Agra University included the study of English and of one of the following languages, *viz.*, Latin, Greek, French, German, Sanskrit, Arabic and Persian. (*Vide* letter from the Registrar, University of Oxford dated October 16, 1928.)

4. *London University*.—The Agra University has been added to the schedule of Universities, whose graduates are eligible under Statute 116 for exemption from the Matriculation Examination of London University. (*Vide* letter No. 2235, dated October 25, 1928 from the External Registrar, University of London.)

5. *University of Wales*.—The University of Wales has decided that the Agra University be recognised as from October 1933 for the purpose of the Matriculation of Agra University students in the University of Wales, and for their admission to candidature for post-graduate degree or diploma under the several Regulations approved by the Court of the University. (*Vide* letter No. E.S. 237-59 of 19th December, 1933, from the High Commissioner for India.)

6. *University of Dublin*.—The Board and Council of Trinity College, Dublin, have recognised the Agra University for purpose of Admission to their course. (*Vide* letter dated 15th November, 1934.)

7. *Institute of Chartered Accountants, London*.—The B.Com. Degree of the Agra University has been approved by the Council of the Institute for purposes of exemption from the preliminary Examination. (*Vide* letter dated February 6, 1929, from the Assistant Secretary of the Institute.)

8. *Scottish Universities Entrance Board*.—The Board have placed the Agra University on their list of approved Universities, *i.e.*, the holder of a degree granted by the Agra University will be granted the Certificate of the fitness by the Board. (*Vide* letter No. ^{E.S. 237-59} ~~E.S. 168-3,~~ dated October 9, 1930 from the High Commissioner for India.)

9. *Council of Legal Education in England, London*.—The Agra University has been added to the list of Universities approved by the Council

and the University's degree examinations will qualify for admission to any one of the four Inns of Court. (*Vide* letter No. 5862, dated January 15, 1933, from the Secretary of the Council.)

(B)—High and Chief Courts in India.

1. The High Court of Judicature at Allahabad has recognised the Agra University among the Universities whose Law graduates are eligible for enrolment as vakils and pleaders of that Court. (*Vide* letter No. 4462-45, dated June 25, 1928, from the Registrar, High Court of Judicature at Allahabad.)

2. The High Court of Judicature at Patna has extended the privilege of admission as pleaders for practice in the Courts subordinate to the Patna High Court to Law graduates of the Agra University. (*Vide* letter No. 5062-IX-14-28, dated November 19, 1928, from the Registrar, High Court of Judicature at Patna.)

3. The High Court of Judicature at Lahore, the Judicial Commissioner's Courts at Nagpur and Delhi and the Chief Commissioner's Courts in Ajmer-Merwara recognise the LL.B. Degrees of all Indian Universities incorporated by an Act of the Legislature.

Scale of Examination and Enrolment Fees

(a) For Admission to Examinations

	RS.
1. B.A. (Part I)	25
B.A. (Part II)	25
2. M.A. (Previous)	25
3. M.A. (Final)	35
4. Master of Arts (with thesis)	50
5. B.Sc. (Part I)	25
B.Sc. (Part II)	25
6. M.Sc. (Previous)	25
7. M.Sc. (Final)	35
8. Masters of Science (with thesis)	50
9. Ph.D.	250
10. D.Litt. D.Sc., or LL.D.	300
11. LL.B. (Previous)	25
12. LL.B. (Final)	45
13. LL.M.	150
14. B.Com. Part I	25
15. B.Com. Part II	25
16. M.Com. (Previous)	25
17. M.Com. (Final)	35
18. Master of Commerce (with thesis)	50

	<i>RS.</i>
19. B.Sc. (Ag.) Part I	25
20. B.S. (Ag.) Part II	35
21. M.Sc. (Ag.) (Previous)	35
22. M.Sc. (Ag.) (Final)	45
23. M.Sc. (Ag.) (with thesis)	60
24. B.T.	55
25. First M.B., B.S.	30
26. Second M.B., B.S.	20
27. Final M.B., B.S., Part I	45
28. Final M.B., B.S., Part II	55
29. Doctor of Medicine	300
30. Master of Surgery	300
31. First B.V.Sc. and A.H. Examination	35
32. Second B.V.Sc. and A.H. Examination	35
33. Third B.V.Sc. and A.H. Examination	35
Final B.V.Sc. and A.H. Examination	55
34. First Bachelor of Science (Engineering) Examination	40
35. Second Bachelor of Science (Engineering) Examination	45
36. Third Bachelor of Science (Engineering) Examination	50
37. Final Bachelor of Science (Engineering) Examination	55
38. For appearing in one Subject at the B.A., B.Sc. or B.Com. Examination or at a Certificate Examination	15
39. Re-examination fee in each subject in M.B.B.S. or B.V.Sc. and A.H. (Subject to a maximum of examination fee prescribed for the examination). . . .	20
40. Supplementary, B.A., B.Sc., B.Com., B.Sc. (Ag.) Parts I or II, B.Sc. (Engg.), B.V.Sc. and A.H. Examination	15
41. Supplementary LL.B. Previous Examination	25
42. Supplementary LL.B. Final Examination	45

(b) Miscellaneous

43. Enrolment fee	4
44. Fee for the re-totalling of marks	10
45. Fee for obtaining marks obtained at a University Examination	2
46. Fee for Previous Examination Certificates	5
47. Fee for Diplomas	10
48. Fee for obtaining Migration Certificates	5
49. Fee for Provisional Certificate	10
50. Fee for copy of entries in the Enrolment Register. . . .	2

ALIGARH MUSLIM UNIVERSITY

Introductory

The Aligarh Muslim University owes its origin to the Aligarh movement which was started by the late Sir Syed Ahmed Khan in the latter part of the last Century. As a result of his efforts the late Muhammadan Anglo-Oriental College was opened at Aligarh in 1875, and it soon grew in reputation and numbers till in 1895 the number of students in the College and School rose to 565 and when, in March 1898, its great founder died, it had attained a prominent position in the whole country. Soon after, in 1899, attempts were made to collect funds for raising the College to the status of a University. The necessary funds were collected and after some delay the Aligarh Muslim University Act came into force in December, 1922.

Character of the University

It is a residential and teaching University. The teaching in each subject is regulated by the department concerned. Provision is also made for tutorial instruction after the manner of the tutorial system prevalent in the Oxford University.

Officers and Staff of the University

Visitor :

Dr. Rajendra Prasad, President of the Indian Union, M.A., M.L., LL.D.

Chief Rector :

Dr. K. M. Munshi, B.A., LL.B., D.LITT., Governor, U.P.

Chancellor :

His Holiness Syedna Mulla Dr. Tahir Saifuddin, D.Th.

Pro-Chancellor :

Nawab Dr. Sir Muhammad Ahmad Said Khan of Chhatari, LL.D.

Vice-Chancellor :

Dr. Zakir Hussain, M.A., Ph.D. (Berlin), D.LITT. (Delhi).

Pro-Vice-Chancellor :

Syed Nurullah, B.A., M.Ed.

Honorary Treasurer :

Haji Obaidur Rahman Khan Sahib Sherwani.

Registrar :

Mr. S. Mahmud Hossain, M.A.

Deans of the Faculty

Faculty of Theology	..	Syed Nurullah, B.A., M.Ed.
Faculty of Arts*	..	Prof. Habibul Rahman, M.A., M.Ed.
Faculty of Science	..	Prof. P. S. Gill, Ph.D. (Chicago). F.N.I.
Faculty of Engineering	.	Prof. Hamidullah Khan, C.E.
Faculty of Medicine	..	Prof. S. N. Mitter, D.O.M.S.
Principal, College of Engineering & Technology, and of the Uni- versity of Polytechnic	..	Prof. Hamidullah Khan
Director, Institute of Ophthal- mology	..	Prof. S. N. Mitter, D.O.M.S.
Principal, Tibbiya College	..	Shifaul-Mulk Hakim Abdul Latif. (Qualified in Tib from Takmilul Tib College, Lucknow, Fazil in Philosophy).
Principal, Women's College	..	Mrs. M. J. Haider, M.A., Ed., Certif. (Bristol).
Principal, Teachers' Training College (Head of the Depart- ment of Education)	..	Prof. H. Rahman, M.A., L.T., M.A. Ed. (Birmingham).
Provost, S. S. Hall	..	Prof. Sh. A. Rashid, M.A., LL.B
Provost, V.M. Hall	..	Prof. S. Nurul Hasan, M.A. (Alld.) D.PHIL. (Oxon), F.R. HIST. S.
Provost, Aftab Hall	..	Dr. S. Muzaffar Ali, M.A., M.Sc., Ph.D. (London).
Provost, S.S. Engg. Hall	..	Dr. M. A. Basir Khan, M.Sc., B.Sc. (Hons.), Ph.D. (Aligarh), Ph.D. (McGill) D.Sc.
Proctor	..	Mr. S. M. Shafi, B.A. (Alig.), B.Sc. (Economics) (London), Bar-at- Law.
Librarian	..	Mr. S. Bashiruddin, M.A. (Dip. in Lib. Punjab), Certif. in Librarian- ship (London).
Medical Officer	..	Capt. Hafizur Rahman, M.B.B.S.

Teaching Staff of the University

<i>Faculty of Theology</i>	..	<i>Dean, The Pro-Vice-Chancellor.</i>
Sunni Theology	..	<i>Reader, Vacant and two Lecturers.</i>
Shia Theology	..	<i>Reader, Vacant and two Lecturers.</i>
<i>Faculty of Arts</i>	..	<i>Dean, Prof. Habibul Rahman, M.A., M.Ed.</i>
English	..	<i>Professor & Head: Dr. A. Bose, M.A. (Dacca), D.PHIL. (Oxon). Reader: Mr. Mukhtar Hamid Ali, M.A. Reader: Mr. B. A. Khan, M.A. 14 Lecturers.</i>
Economics	..	<i>Professor & Head: Mr. D. P. Mukerji, M.A. Reader: Mr. Mohd. Shabbir Khan, M.A. (Alig.), M.A. (Mich.). Reader: Mr. Abu Salim, M.A. (Alig.)</i>
Philosophy & Psychology	.	<i>Professor and Head: Mr. M. Umaruddin, M.A., (Phil.), M.A. (Arabic), M.A. (Per.), B.T. (Alig.) Reader: Mr. Zafar Ahmad Siddiqui, M.A. (Alig.). 7 Lecturers.</i>
History	..	<i>Professor & Head: Mr. Shiek Abdul Rashid. M.A., LL.B. Professor: Dr. S. Nurul Hasan, M.A. (Alld.), D.PHIL. (Oxon), F.R. HIST. S. Reader: Mr. K. A. Nizami, M.A., LL.B. Reader: Dr. Satish Chandra, M.A., D.PHIL. 7 Lecturers.</i>
Political Science	..	<i>Professor & Head: Mr. Mohd. Habib, B.A. (Oxon), Bar.-at-Law. Reader: Mr. Ch. Hoh. Sultan, M.A. (Luck.). 6 Lecturers.</i>
Arabic and Islamic Studies	.	<i>Professor & Head: Dr. Abdul Aleem, B.A. (Hons.), D.PHIL. (Berlin). Reader: Dr. S. Maqbool Ahmad, M.A., B.LITT., D.PHIL. 5 Lecturers.</i>
Persian	..	<i>Professor & Head: Dr. S. Hadi Hasan, B.A. (Cantab). Ph.D. (London). Reader: Moulvi Zia-i-Ahmad, M.A. (Alld.), Fazil Darsi Nizami. 3 Lecturers.</i>

Urdu	.. <i>Professor & Head</i> : Mr. R. A. Siddiqui, M.A. <i>Reader</i> : Dr. Masud Husain, M.A., Ph.D. 9 Lecturers.
Hindi & Sanskrit	.. <i>Reader & Head</i> : Dr. Pt. H. L. Sharma, M.A., Ph.D. 6 Lecturers.
Education	.. <i>Professor & Head</i> : Mr. Habibul Rahman, M.A., L.T., M.A. Ed. (Birmingham). <i>Reader</i> : Dr. A. Mujib, M.Sc., M.Ed., Ph.D. (Columbia). 14 Lecturers.
Law	.. <i>Reader & Head</i> : Mr. Hafizul Rahman, B.A., LL.B. 4 Lecturers.
Commerce	.. <i>Reader & Head</i> : Mr. S. M. Shafi, B.A. (Alig.), B.Sc. (Economics) (London), BAR.-AT-LAW. 4 Lecturers.
<i>Faculty of Science</i>	.. <i>Dean</i> , Prof. P. S. Gill, M.S., Ph.D. (Chicago), F.N.I., F.R.S.A.
Botany	.. <i>Reader & Head</i> : Dr. Reayat Khan, M.Sc., Ph.D. <i>Reader</i> : Mr. Abrar Mustafa Khan, M.Sc., Ph.D. 9 Lecturers.
Chemistry	.. <i>Professor & Head</i> : Dr. M. O. Farooq, M.Sc., Ph.D. (Alig.), Ph.D. <i>Reader</i> : Dr. Akhlaq R. Kidwai, B.Sc. (Jamia), M.Sc. (Ill.) Ph.D. (Corwell). <i>Reader</i> : Mr. Waheeduddin Malik, M.Sc., Ph.D. 15 Lecturers.
Geography	.. <i>Professor & Head</i> : Dr. S. M. Tahir Rizvi, B.A. (Hons.), Ph.D. (London), M.A., LL.B. (Alig.), BAR.-AT-LAW. <i>Reader</i> : Dr. S. M. Ali, M.A., M.Sc., Ph.D. (London). 8 Lecturers.
Geology	.. <i>Reader & Head</i> : Dr. P. N. Ganju, M.Sc., Ph.D. 4 Lecturers.
Mathematics & Statistics	.. <i>Professor & Head</i> : Dr. S. M. Shah, M.A., Ph.D., (London). <i>Reader</i> : Dr. Jamil Ahmad Siddiqui. 10 Lecturers.

Physics	..	<p><i>Professor & Head:</i> Dr. P. S. Gill, M.sc. (South California), Ph.D. (Chicago), F.N.I. <i>Reader:</i> Dr. S. Nawazish Ali, M.sc., Ph.D. (Alig.). <i>Reader:</i> Mr. S. Gupta, M.sc. (Cal.), P.R.S. <i>Reader:</i> Dr. P. Venkateswarlu, M.sc. D.sc. 13 Lecturers.</p>
Military Science	..	<p><i>Reader & Head:</i> Capt. S. M. Ali, M.A., M.sc., Ph.D. (London). 3 Lecturers.</p>
Zoology	..	<p><i>Professor & Head:</i> Dr. M. B. Mirza, D.PHIL., B.sc. (Hons.), (Bom.), F.R.M.S. (London). <i>Reader:</i> Dr. M. A. Basir Khan, M.sc., B.sc. (Hons.), Ph.D. (Alig.), Ph.D. (McGill), D.sc. 11 Lecturers.</p>
<i>Faculty of Engineering & Technology</i>		<p><i>Principal:</i> Professor Hamidullah Khan, C.E. <i>Dean:</i> Professor Hamidullah Khan, C.E.</p>
Civil Engineering	..	<p><i>Professor & Head:</i> Prof. Hamidullah Khan, C.E. <i>Reader:</i> Mr. A. M. Chowdiah, M.sc. (Engg.). (Michigan State College). <i>Reader:</i> Mr. Mohd. Yasin Ansari, B.sc. (Engg.) (Civil) M.A.sc. (Canada). 10 Lecturers.</p>
Electrical Engineering	..	<p><i>Professor & Head:</i> Dr. N. C. Saha, B.sc. (Hons.) (Engg.) etc. <i>Reader:</i> Mr. S. C. Bhattacharya, B.sc. (Hons.) (Cal.), B.sc. (Engg.). 8 Lecturers.</p>
Mechanical Engineering	..	<p><i>Professor & Head:</i> Mr. N. C. Dey, M.sc. (Cal.), B.sc. (Hons.) Engg. (London), A.M.I.M.E.C.H.E., (London), A.M.I.E. (India). <i>Reader:</i> Mr. A. H. M. Habibullah, B.A., B.C. (Madras), B.S., M.E. (Utah). 6 Lecturers.</p>
<i>Faculty of Medicine</i>		
Ophthalmology	..	<p><i>Professor & Head:</i> Dr. S. N. Mitter, D.O.M.S. 6 Lecturers.</p>
Unani Tib & Surgery	..	<p><i>Principal Reader & Head:</i> Shifaul Mulk Hakim Abdul Latif, Qualified in Tib from Takmilul Tib College, Lucknow, Fazil in Philosophy. 12 Lecturers.</p>

Constitution of the University

The principal authorities of the University are the Court, the Executive Council, the Academic Council, and the Standing Finance Committee.

The Vice-Chancellor is the principal executive and academic officer of the University.

All appointments on the teaching staff are made by the Executive Council from a list of persons recommended by a Selection Committee as detailed below:—

Professor—

- (i) The Dean of the Faculty ;
- (ii) The Head of the Department concerned, if he is a Professor ;
- (iii) Three persons, not connected with the University, nominated by the Academic Council for their special knowledge of or interest in the subject with which the Professor will be concerned.

Reader or Lecturer—

- (i) The Dean of the Faculty ;
- (ii) The Head of the Department concerned ;
- (iii) Two persons, not connected with the University, nominated by the Academic Council for their special knowledge of, or interest in the subject with which the Reader or Lecturer will be concerned.

Number of Students in the University under different Faculties in 1955

		Men	Women
Intermediate (Arts, Sc. & Com.)	..	682	112
B.A. & B.Sc. (Pass) & B.Com.	.. ..	822	215
Post-Graduate M.A., M.Sc., B.Th., and Research students	.. ..	644	76
Diploma in Foreign Affairs	.. ..	20	—
LL.B., B.Ed., & M.Ed.	.. ..	387	30
B.Sc. Engg.	.. ..	280	—
Dip. Engg.	.. ..	248	—
Tibbiya (B.U.M.S.)	.. ..	109	4
Diploma in Ophthalmology	.. ..	15	—
Certificate in Library Science	.. ..	32	—
Total	..	3,239	437

**Number of successful candidates in different Examinations
held in the year 1955**

	Men	Women
High School	204	152
Intermediate Arts	43	40
Intermediate Science	156	8
Intermediate Commerce	27	.
B.A. Pass	106	37
B.Sc. Pass	163	6
B.Com. (Prev. & Final)	84	..
B.Sc. (Hons.)	.	1
M.A. (Prev. & Final)	346	56
M.Sc. (Prev. & Final)	176	17
M.Ed.	12	8
B.Ed.	75	21
B.U.M.S. (Tib)	12	2
LL.B. (Prev. & Final)	204	1
B.Sc. Engg. (Civil, Mech. & Elec.)	92	..
B.Th.	5	1
Ph.D.	1	..
Dip. Engg.	46	..
Dip in Foreign Affairs	5	..
Certificate in Library Science	27	2
Diploma in Ophthalmology	6	..
Total	1,788	352

LIST OF SCHOLARSHIPS AWARDED EVERY YEAR

Scholarships for Special Subjects

1. ARABIC AND ISLAMIC STUDIES SCHOLARSHIPS

A. Arabic :

- (a) Two scholarships of Rs. 30/- p.m. (Rs. thirty) each to students studying Arabic in the M.A. Class.
- (b) Three scholarships of Rs. 15/- p.m. (Rs. fifteen) each to students taking up Arabic in the B.A. Class.
- (c) Four scholarships of Rs. 10/- p.m. (Rs. ten) each to students taking up Arabic in the Intermediate Class.

B. Islamic Studies :

- (a) Two scholarships of Rs. 30/- p.m. (Rs. thirty) each to students studying Islamic Studies in the M.A. Class.
- (b) Three scholarships of Rs. 15/- p.m. (Rs. fifteen) each to students taking up Islamic Studies in the B.A. Class.

2. THEOLOGY SCHOLARSHIPS :

- (a) Three scholarships of Rs. 25/- p.m. each to students reading in B.Th. Previous Class.
- (b) Three scholarships of Rs. 25/- p.m. each to students reading in B.Th. Final Class.

3. SANSKRIT SCHOLARSHIPS :

One scholarship of Rs. 10/- p.m. to a Muslim Student taking up Sanskrit in B.A. Class and one of Rs. 8/- p.m. to a Muslim Student taking up Sanskrit in Intermediate Class.

Applications for the above to be submitted to the Registrar on the recommendation of the Head of the Department of Hindi and Sanskrit and Dean, Faculty of Arts.

4. SCHOLARSHIPS FOR THE STUDY OF ARABIC (OR PERSIAN) BY NON-MUSLIMS AND OF SANSKRIT BY MUSLIMS :

Two scholarships of Rs. 75/- p.m. are awarded by the Government of India each year to students seeking admission to Intermediate Class, one to a non-Muslim offering Arabic (or Persian) and the other to a Muslim offering Sanskrit as one of his subjects, and is continued to the end of B.A. Honours course subject to satisfactory progress by the scholar.

5. SCIENCE SCHOLARSHIPS :

- (a) One M.Sc. scholarship of Rs. 10/- p.m. (in the M.Sc. Previous Class).
- (b) Five B.Sc. scholarships each of Rs. 6 p.m. to students of IIIrd Year Class studying for the B.Sc. Degree (Pass or Honours).

These scholarships will be awarded by the Academic Council on the recommendation of a Committee consisting of the Heads, Departments of Physics, Chemistry, Zoology, Botany, Mathematics and Geography, after a competitive examination to be held within six weeks of the commencement of the session on dates to be fixed by the Dean, Faculty of Science. Only first and second divisioners will be eligible to appear at this competitive examination. Notice about this examination will be given by the Dean, Faculty of Science.

6. SCHOLARSHIPS TO B.ED. STUDENTS :

20 scholarships of Rs. 20/- p.m. each for 10 months to students of the B.Ed. Class who are bona-fide residents of U.P. These will be awarded by the Academic Council on the recommendation of the Head

of the Department of Education and the Vice-Chancellor. Applications should be submitted to the Head of the Department of Education.

7. SCHOLARSHIPS IN MUSLIM HISTORY AND MUSLIM PHILOSOPHY :

Two scholarships of Rs. 50/- p.m. each to students who take up M.A. with Muslim History or Muslim Philosophy, after passing M.A. in Arabic. The scholarships in Muslim Philosophy will be awarded to those who satisfy the following conditions :—

- (a) They have taken their B.A. Degree with Philosophy as one of their subjects and for those who join after 1943 have taken Muslim Philosophy as one of their papers for the B.A. Examinations with additional Arabic Texts.
- (b) They have passed the M.A. Examination in Arabic or possess other qualifications in Arabic recognized by the Academic Council in this behalf.

N.B.—These scholarships will not be awarded to students who pass M.A. in Arabic in the third division.

5 Special Scholarships

- (a) *Maharaja Mohindra Singh Scholarships*:—Three scholarships of Rs. 4 p.m. each (for eight months only) to students standing first in the Promotion Examination of Class XI in Arts, Commerce and Science respectively (to be awarded on the recommendation of the Dean concerned).
- (b) *Sir Azizuddin Ahmad Scholarship*:—One scholarship of Rs. 10 p.m. to a student of Biswan, or if such student is not available to that of any district in Oudh studying at this University (to be awarded by the Academic Council on the recommendation of the Vice-Chancellor).
- (c) *Qadria Scholarship*:—One scholarship of Rs. 7 p.m. to be awarded in alternate years to a Sunni Muslim student of Nagina, or if no such student is available, to that of any place in Bijnor District, or failing such student, to any other Sunni Muslim student of the University. (To be awarded to a student of the Intermediate Class. If no such student is available, to that of B.A. or B.Sc. Class, and if such student is also not available, to that of M.A. or M.Sc.).

N.B.—Applications should be submitted to the Registrar through the Provost or Proctor (in the case of non-resident students).

- (d) *Sir William Marris Scholarship*:—One scholarship of Rs. 25 p.m. tenable for nine months to a student of the University who, in the opinion of the Vice-Chancellor, has done best in the examination for Bachelor's Honours Degree and intends prosecuting his studies further for a Master's Degree. The scholarship shall be awarded alternately to Arts and Science students. Applications should be submitted to the Registrar.
- (e) *Nawab Agha Ali Raza Khan Scholarship*:—The amount of this scholarship is the interest realised by investment of Rs. 1,000/- donated by the above donor, to be paid in a lump sum to the poorest and most deserving Shia student of the University, whom the Vice-Chancellor may select. Applications should be submitted to the Registrar through the Provost or Proctor (in the case of non-resident students).
- (f) *Sir Shah Mohd. Sulaiman Scholarship*:—One scholarship of Rs. 25/- p.m. This scholarship will be awarded by the Academic Council to a promising student of B.Th. or M.A. in Arabic or Persian class on the recommendation of the Vice-Chancellor. Applications should be submitted to the Registrar with the recommendation of the Head of the Department concerned.

Concession in Fees

The following concessions in fees are granted to a limited number of deserving and needy students:—

- (i) *Full Freeship*:—Students given F.F. will be exempted from the payment of Tuition Fee.

Students joining the LL.B. Course only shall not be given full freeship. Students joining LL.B. and M.A. or M.Sc. combined course, given full freeship shall pay Rs. 11 p.m. only as Tuition Fee.

- (ii) *Half Freeship*:—Students given half freeship shall be required to pay only half the Tuition Fee.

Students joining LL.B. and M.A. or M.Sc. double course given half freeship shall pay Rs. 16 p.m. only as Tuition Fee.

Students joining LL.B. Course only shall not be given half freeship.

- (iii) *Reduced Rates*:—A limited number of deserving and needy resident students may be permitted to pay the following fees at reduced rates as follows:—

					Rs.	A.	P.
1. University Fee	(a) Medical fee	..	..	0	4	0	
	(b) Games fee	..	..	0	12	0	
2. Hall Fee	(a) Hostel Establishment Fee	..	..	2	0	0	
	(b) Room Rent	..	..	1	0	0	
	(c) Games Fee	..	..	0	4	0	

N.B.—(1) Students enjoying reduced rates shall not as a rule, be allowed to live in a single-seated room or in a room in which the number of students has been reduced at the desire of the students.

(2) In case of students residing in a house rented by the University the reduced rate concession shall not include reduction in the room rent.

Applications for concession in fees should be sent to the Provost of the Hall concerned, or to the Proctor, in case of non-resident students, by August 15. The list of students to whom concession have been awarded shall be notified by August 31. In case of students who have passed the preceding University Examination in the 1st Division, applications for concessions in fees may be considered earlier.

Applications of post-graduate students for full freeship or half freeship should be sent to the Provost (or the Proctor) through the Chairman of the Department concerned.

Concessions given to students may be cancelled on account of misbehaviour or unsatisfactory progress in studies, or if the financial condition of the students is such that he no longer stands in need of the assistance.

Loan Scholarships and Stipends

(i) *Duty-Loans*.—Stipends are given by the Duty Society by way of pecuniary assistance to deserving students, as a loan. The student receiving such stipend shall have to fill in a bond promising to repay the amount. Applications for stipends should be sent to the Keeper of the Duty Society through the Provost (or the Proctor) by August 15.

(ii) *Loan Scholarships awarded by the Muslim Educational Conference*.—Some scholarships are awarded by way of loans of students of Arabic, and professional and technical subjects from the funds at the disposal of the All India Muslim Educational Conference. The amounts of these scholarships are recovered in suitable monthly instalments when scholar gets employed on completing his education. Applications for these loan scholarships are to be made to the Secretary of the Conference each year on the prescribed form.

(iii) *Games Committee Stipends*.—The University Games Committee awards a small number of stipends to members of the University Teams with a good academic record, who stand in need of financial assistance. Applications, when invited, should be sent to the Chairman of the Games Committee through the Provost (or the Proctor) and the President of the Games Club concerned.

(iv) *Stipends Awarded by the Old Boys Association*: The Old Boys Association awards a number of stipends to deserving students in

need of financial assistance. Preference is given, in the award of these stipends, to the dependents of the Old Boys of the University. Applications, when invited, should be sent to the Secretary of the Old Boys Association through the Provost (or the Proctor).

The loan scholarships mentioned above shall be credited to the students accounts. This assistance may be cancelled if the financial condition of the student is such that he no longer stands in need of the assistance, or on grounds of mis-behaviour, unsatisfactory academic progress.

Library and Laboratories

The University Library contains 98,582 books in the general, 17,000 in Oriental section (including about 4,000 manuscripts in the Subhanullah Collections), about 15,000 books in the Scientific and Technical Section and 244 journals. The library also subscribes to important journals and periodicals. The library is open to students for reading, and books can be borrowed by them. There are also special Seminar libraries attached to different Departments. The Library and the School Museum of the All-India Muslim Educational Conference are open to the students of the Teachers' Training College.

Laboratories for Physics, Chemistry, Botany and Zoology, Geology, Geography and Psychology Departments are furnished with the latest scientific equipment. Special Research Laboratories have been equipped and all facilities for research are given.

Physical and Medical Inspection

The University is provided with a hospital, under a qualified Medical Officer and two Sub-Assistant Surgeons with the necessary staff. The hospital has spacious and airy rooms for indoor patients. The Civil Surgeon of Aligarh is called for consultation in case of serious illness. All resident students undergo a medical examination.

Healthy open air exercises, suitable to the physique of the students are encouraged and hours are set apart for this purpose.

Moinuddin Art Gallery

This has been constructed with Rs. 50,000 endowed by Prof. Moinuddin Ahmad of Wilson College, Bombay and furnished with the paintings presented by the Donor. It is open to the public.

Publication and Extension Work

A highly successful system of University Extension lectures is in operation and Lectures are arranged to be delivered on learned and interesting subjects. The University has its own press for the work of

publishing the Aligarh Magazine conducted by the students themselves, the Muslim University Gazette, the official organ of the University, and the University Journal conducted by the University Staff. Arrangements are often made to provide for vacation lectures to teachers in Secondary schools.

Military Training

The University possesses two Platoons of the National Cadet Corps. The movement is very popular and there is always a large number of recruits on the waiting list.

Association in the University

The most important University Association is the Muslim University Union run on the lines of the Cambridge and Oxford Unions. It is the centre of the social and intellectual life of the students. Other Associations are :—

The Raleigh Society	The Urdu Society
The Historical Society	The Curzon Geographical Society
The Economic Society	The Mathematical Society
The Philosophical Society	The Scientific Society
The Arabic Society	The Chemical Society
The Physical Society	The German Society.
The Persian Society	

Residence and Cost of Living

The University maintains four Halls consisting of several Hostels under the general supervision of the Provost. More than 75 per cent of the students are in residence. The fees vary from Rs. 55 to Rs. 65 per month including tuition fees, lodging, food, medical attendance and games.

Budget

The figures of revenue income and expenditure for 1955-56 are Rs. 32,89,985 and Rs. 46,87,914 respectively (abstract appended).

Women's Education

Women students are admitted to the M.A., M.Sc., B.Ed., M.Ed., and LL.B. classes of the University. The teaching arrangements for the B.A., B.Sc. classes are made in the Women's College.

Sports and Games

The University has separate clubs for Cricket, Football, Hockey, Tennis, Swimming and Athletic Sports. The Presidents of these clubs are chosen from among the staff of the University, and all clubs are under the General Games Club.

The late lamented Nawab Sir Mohammad Nasrullah Khan of Bhopal presented a silver trophy which is given to the winner of All-India Cricket Tournament held every year in Aligarh.

Nawab Salar Jang Bahadur of Hyderabad has presented a Shield to the Football Club which is given every year to the winning team in the All-India Football Tournament.

The new Gymnasium which was constructed with the munificent donations of His Highness the Maharaja Tukoji Rao Holkar of Indore and Capt. Nawab Dr. Sir Mohd. Ahmad Said Khan, K.C.S.I., K.C.I.E., M.B.E., LL.D., has now been completely fitted up with up-to-date apparatus. Provision is also made for wrestling and binnot.

Military drill has been made compulsory for the students of the School and Intermediate classes optional for the students of the Degree classes. It is also proposed to start a miniature Rifle Club.

Courses of Study, Degree and Examinations

The University offers the degrees of B.A. (Pass and Honours), M.A., M.Com., Ph.D. and D.Litt. in Arts; B.Sc. (Pass and Honours), M.Sc., Ph.D. and D.Sc. in Science; B.Sc. (Engineering) Civil, Mechanical, Electrical; LL.B., LL.M., and LL.D. in Law; B.Ed., M.Ed., in Teaching and the Degrees of Bachelor, Master and Doctor of Theology and Bachelor's Degree in Unani, Tib and Surgery and Bachelor in Commerce; Diploma in Ophthalmology, Diploma in Foreign Affairs and Diplomas in Electrical, Mechanical and Civil Engineering and Certificate in Library Science.

Courses of Study

I. COURSE FOR WHICH INSTRUCTION IS PROVIDED.

1. Intermediate (Arts, Science or Commerce).

Duration of Courses—Two academic years (called First and Second Years).

SUBJECTS:

A. COMPULSORY:

- (i) Muslim (Shia or Sunni) Theology or History of Civilization.
- (ii) Urdu with Elementary Hindi or Hindi with Elementary Urdu. (Students belonging to areas where Hindustani is not the spoken language may offer instead either Elementary Urdu or Elementary Hindi) or Indian History and Culture (for non-Indian and non-Pakistani Students only).

B. OPTIONAL :*Intermediate Arts :*

English and any three of the following subjects :—

- (1) Arabic or Persian or Sanskrit or Urdu or Hindi, (2) Philosophy, (3) Psychology, (4) History, (5) Islamic History, (6) Economics, (7) Elementary Politics or Civics, (8) Mathematics, (9) Geography, (10) Military Science, (11) Education, and (12) Domestic Science (for women candidates only).

Intermediate Science :

English and any three of the following subjects :—

- (1) Physics, (2) Chemistry, (3) Botany, (4) Zoology, (5) Geology, (6) Geography. (7) Mathematics, and (8) Military Science.

Intermediate Commerce :

- (1) English, (2) Book-keeping and Accountancy, (3) Business Methods and Correspondence, (4) (i) Elementary Economics, (ii) Commercial Geography, (5) Any one of the following subjects :—(i) Steno-Typing (Shorthand and Typewriting), (ii) Elements of Banking, (iii) Elements of Industrial Organization, and (iv) Mathematics. Minimum qualification is High School Examination of any recognized University or Board.

2. B.A. and B.Sc. (Pass) Course.

Duration of Course—Two academic years (called B.A. or B.Sc. Junior and Senior Classes or simply III and IV years.).

SUBJECTS :**A. COMPULSORY :**

- (i) General English, (ii) Muslim (Shia or Sunni) Theology or History of Civilization, (iii) Urdu with Elementary Hindi or Hindi with Elementary Urdu (Students belonging to areas where Hindustani is not the spoken language, may offer instead either Elementary Urdu or Elementary Hindi), or Indian History and Culture (for non-Indian and non-Pakistani students only).

B. OPTIONAL :*For B.A. Students :*

Any three of the following subjects :—

- (1) English Literature, (2) History, (3) Philosophy, (4) Political Science, (5) Psychology, (6) Economics. (7) Mathematics, (8) Statistics, (9) Geography, (10) Military Science, (11) Arabic, (12) Persian, (13) Sanskrit, (14) Urdu, (15) Hindi, (16) Islamic Studies, and (17) Education.

For B.Sc. Students :

Any three of the following subjects :—

- (1) Physics, (2) Chemistry, (3) Botany, (4) Zoology, (5) Geology, (6) Geography, (7) Military Science, (8) Mathematics and Statistics, and (9) Bio-Chemistry.

3. B. Com. Course.

Duration of Course :—Two academic years. The Examination for the degree will be held in two parts, Previous as well as the Final Examination is of one academic year each. The division in which candidates successful at the Examination are to be placed shall be determined on the combined result of the Previous and the Final Examinations.

SUBJECTS :

- (i) General English, (ii) Muslim (Sunni or Shia) Theology or History of Civilization, and (iii) Urdu with Elementary Hindi or Hindi with Elementary Urdu. (Students belonging to areas where Hindustani is not the spoken language, may offer instead either Elementary Urdu or Elementary Hindi), or Indian History and Culture (for non-Indian and non-Pakistani students only).

Students may appear at the Examination in one or more on the above subjects either with the Previous or with the Final Examinations.

The Previous Examination shall comprise the following :—

- (a) Principles of Economics, (b) Economic Development of India, (c) Commercial and Industrial Law, and (d) Elements of Statistics.

The Final Examination shall comprise any two of the following groups of subjects :—

- (a) Banking and Finance :—(i) Currency and Banking, (ii) Public Finance, and (iii) Accounts.
 (b) Industry :—(i) Industrial and Commercial Organization, (ii) Advanced Accounts, and (iii) Secretarial Practice.
 (c) Trade and Transport :—(i) Trade (Internal and Foreign), (ii) Transport, and (iii) Co-operative Organisation.

4. B.A. and B.Sc. Honours Course.

Duration of the Course :—Three academic years. A student who passes the B.A. or B.Sc. Honours (Examination) will be eligible for admission to the M.A. or M.Sc. (Final) Class.

SUBJECTS :

The Honours Course includes the study of a Main Subject, one Subsidiary subject and General English.

Main Subjects for B.A. (Hons.) Course.

Any one of the following :—

English Literature, Philosophy, Economics, History, Political, Science, Arabic, Persian, Sanskrit, Urdu, Hindi, Islamic Studies, Psychology, Geography and Mathematics.

Main Subjects for the B.Sc. (Hons.) Course :

Any one of the following :—

Geography, Mathematics, Physics, Chemistry, Botany, Zoology, Geology and Psychology.

NOTE:—Honours Course in the above mentioned subjects will be opened only if so desired by the Departments of Studies concerned.

Minimum qualification is the Intermediate examination of any recognised University or Board.

5. *M.A., M.Com and M.Sc. Course :*

Duration of Course :—Two academic years. The Examinations for the degree will be held in two parts, Previous and Final. The duration of the Course for the Previous as well as the Final Examination is one academic year each.

SUBJECT :

Courses of Instruction for the Master's degree are provided in the following subjects :—

M.A. English Literature, History, Political Science, Economics, Philosophy, Psychology, Arabic, Persian, Sanskrit, Urdu, Hindi, Geography, Mathematics and Islamic Studies.

M.Com. Course :

M.Sc. Psychology, Geography, Mathematics, Physics, Chemistry, Botany, Zoology and Geology.

Minimum qualifications required are B.A., B.Com. and B.Sc. degrees respectively.

6. *LL.B. Course :*

Duration of the Course :—Two academic years. The Examination for the degree will be held in two parts, Previous and Final. The duration of the course for the Previous as well as the Final Examination is one academic year each. Results of both the Examinations are declared separately.

Minimum qualification is Bachelor's degree.

7. *Courses for Degrees in Muslim Theology :*

Instruction is provided by the University for the degrees of Bachelor and Master of Theology in Sunni as well as Shia Theology.

Duration of the Course:—Two academic years. The Examination is divided into two parts, Previous and Final. The duration of the course for each Examination is one academic year.

M.Th. Course is open to students who have taken the B.Th. Degree.

Duration of the course is one academic year.

8. *Courses for Degrees in Education :*

Instruction is provided for the degrees of Bachelor and Master of Education and for Ph.D. in Education.

Minimum qualifications required are Bachelor's B.Ed. and M.Ed. respectively.

9. *Courses for the Degree and Diploma in Engineering :*

B.Sc. in Civil, Mechanical or Electrical Engineering.

Minimum qualification is Intermediate Examination with Mathematics, Physics and Chemistry. The duration of the course is three academic years, followed by practical training for one year.

Diploma in Civil, Mechanical or Electrical Engineering :

Minimum qualification is High School Examination with Mathematics as a subject. The duration of the course is three academic years, followed by practical training for one year.

10. *Bachelor of Unani Medicine and Surgery :*

The B.U.M.S. Course is open to students who have passed the High School or an Equivalent Examination. The duration of the course is one academic year.

11. *Diploma in Ophthalmology :*

The D.O. Course is open to students who have passed the M.B.B.S. or an Equivalent Examination. The duration of the course is one academic year.

12. *Diploma in Foreign Affairs :*

The course is open to students who have taken the Bachelor's Degree of a recognised University. Duration of the course is two academic years.

13. *Certificate in Library Science :*

The minimum qualification for admission is the Intermediate Examination of any recognised University or Board or, in the case of

those who at the time of admission have served in a Library for at least one year, the minimum qualification will be the High School or Equivalent Examination of a recognised University or Board. The duration of the course is about four months.

III. COURSE OF RESEARCH FOR THE Ph.D. DEGREE :

Minimum qualification for admission to the Research Course for the Ph.D. Degree, is M.A., M.Com., or M.Sc. Degrees of the University or a Degree recognised by the University as its equivalent. Facilities for post-graduate and research work exist in the same subjects are open to students for studies leading to M.A., M.Com. or M.Sc. degrees.

Minimum period of residence in Aligarh, required for the degree, is two years.

SCALE OF MARKS

			Minimum pass mark per cent	I Division per cent	II Division per cent	III Division per cent
High School	.	..	33	60	45	33
Intermediate	.	..	33	60	45	33
B.A. or B.Sc.	.	.	33	60	45	33
B.Com.	.	..	36	60	48	36
B.A. or B.Sc. (Hons.)		..	36	60	48	36
M.A. or M.Sc. (Prev. Final) and M.Ed.		..	36	60	48	36
LL.B. (Prev., Final)	..	..	30	65	50	..
B.Ed.		..	36	60	48	36
B.Th. (Prev. Final)	.	.	36	60	48	36
B.Sc. (Engineering) Electrical	..		40	65	50	..
B.Sc. (Engineering) Mechanical	..		40	65	50	..
B.Sc. (Engineering) Civil	..		40	65	50	..
LL.M.	..	..	65	..	..	..
Tibbiya (B.U.M.S.)	..	..	40	65	55	40

Budget Estimates for the year, 1955—56

Abstract of Income

Heads of Income	Estimates for 1954—55 Rs.	Revised Estimates for 1954—55 Rs.	Actuals up to Dec. 1954 Rs.	Estimates for 1955—56 Rs.
1. GRANTS-IN-AID :				
(i) Central Govt. Block Grant ..	12,50,000	12,50,000	9,37,500 0 0	12,50,000
(ii) Adhoc Grant (Engg. College) ..	1,23,000	1,23,000	.	1,23,000
(iii) U.P. Govt. Grants ..	1,85,799	1,85,799	1,20,277 0 0	1,91,039
(iv) Former Ruling State Grants ..	58,000	58,000	5,391 0 9	58,000
2. Interest on Investments ..	1,77,022	1,77,022	91,069 12 0	1,77,022
3. Waqfs ..	3,030	3,030	2,200 0 0	3,030
4. Royalties ..	4,900	4,900	3,030 12 0	4,900
5. Fees from Students ..	8,63,729	8,58,957	3,51,690 0 2	8,75,473
6. Rents ..	1,04,704	1,04,704	47,698 5 0	1,02,492
7. Contributions and collection charges :				
(i) Medical College Fund towards salary and other expenses of the Institute of Ophthalmology ..	1,37,848	..	..	50,000
(ii) Other contributions and collection charges ..	90,203	90,203	13,246 11 0	93,224

Heads of Income	Estimates for 1954—55	Revised Estimates for 1954—55	Actuals up to Dec. 1954	Estimates for 1955—56
	Rs.	Rs.,	Rs.	Rs.
8. Fines, Sale of Prospectus, Syllabuses and other Misc. Income ..	1,04,091	1,10,641	47,158 15 6	1,22,605
9. Income from Electricity Deptt. ..	1,60,000	1,60,000	63,729 12 6	1,55,200
10. Grant for Islamic Studies ..	84,000	..	..	84,000
11. Grant for Research and Publication in Mediaeval Indian History ..	1,00,000	..	..	..
Total ..	34,46,326	31,26,256	16,82,992 4 11	32,89,985

Budget Estimates for the year, 1953—56

Abstract of Expenditure

Heads of Expenditure	Actuals for 1953—54	Estimates for 1954—55	Revised Estimates for 1954—55	Actuals up to Dec. 1954	Estimates for 1955—56
	Rs.	Rs.	Rs.	Rs.	Rs.
RECURRING EXPENDITURE :					
1. Salaries ..	21,77,075	18,41,220	12,79,190	13 6	21,75,000
2. Dearness allowance .	5,26,534	4,58,673	3,22,734	11 3	5,28,000
3. General T.A., Con- veyance and other allowances ..	58,280	68,515	48,265	0 3	62,440
4. Provident Fund ..	1,00,931	75,273	60,812	6 0	1,20,000
5. Gratuities ..	2,500	2,500	..		2,500
6. Contingencies, Lab. Running, Printing & Binding, Deprecia- tions, Stock and other General Miscel- laneous expenses ..	11,18,061	11,19,243	6,11,962	6 6	11,49,998
TOTAL RECURRING EXPENDITURE ..	39,83,381	35,65,424	23,22,965	5 6	40,37,938
NON-RECURRING EXPENDITURE :					
1. Building Programme	1,94,036	97,995	45,047	12 3	2,50,000
2. Other Items ..	4,62,153	2,01,827	1,08,567	3 0	3,99,976
TOTAL NON-RECURRING EXPENDITURE ..	6,56,189	2,99,822	1,53,614	15 3	6,49,976
GRAND TOTAL RECURRING AND NON-RECURRING EXPENDITURE ..	46,39,570	38,65,246	24,76,580	4 9	46,87,914

ALLAHABAD UNIVERSITY

Introductory : Character of the University

Founded in 1887, the University concerned itself mainly with examinations, having no teaching staff except that of its School of Law until 1914. Subsequently it established Chairs and Readerships, etc., for research work in Economics, Ancient Indian Culture, Modern Indian History for graduate students. In January 1922 was passed an Act which came into operation in July 1922 for the re-organisation of the University as a Unitary, Teaching and Residential institution with control over the quality and character of the teaching in Associated Colleges. The Muir Central and Law Colleges became the nucleus of a teaching University, the jurisdiction of which was limited to territorial area of ten miles from the Convocation Hall of the University. Within this area there are three institutions which supplement instruction given in the University, viz., the Ewing Christian College, the Kayastha Pathshala College and the Agricultural College. The Women's Department undertakes full instruction for the degree course. By Act VIII of 1926 a University was established at Agra and the control of the Associated Colleges was transferred to it. The new Act, which came into force with effect from 1st July, 1927, has set the Allahabad University free to function as a Unitary, Teaching and Residential University by relieving it of the responsibility of controlling the quality and character of the teaching given in its name by the Associated Colleges and placing such responsibility upon the new University. Tutorial instruction is regularly imparted in the University. There are Diploma Courses in Local Self-Government and Indian Music, and Certificate Courses in Laboratory Workshop Training, Social Service, and Photography and a department of Fine Arts including music.

Officers and Staff of the University 1954—55

Chancellor :

Sri Rajyapal K. M. Munshi, B.A., LL.B., D.LITT.

Vice-Chancellor :

Sri B. N. Jha, B.ED. (EDIN.)

Treasurer :

Shri K. L. Misra. M.A., LL.B.

Registrar :

Shri K. L. Govil, M.A., B.COM.

Deputy Registrar :

Vacant.

Assistant Registrar : (Administration).

Dr. I. D. Caleb, M.SC., D.PHIL., LT.

Assistant Registrar : (Accounts).

Sri K. P. Mohiley, M.A., B.T.

Accounts Officer :

Sri R. C. Sharma, M.A.

Proctor :

Lt. Col. S. G. Tiwari, M.A.

From 1953-54

Librarian :

Dr. B. P. Saksena, M.A., PH.D.

*Teaching Staff :***ENGLISH***Professor :* Shri S. C. Deb, M.A.*Associate Professor :* Dr. P. E. Dustoor, M.A., D.LITT.*Readers :* 1. Shri K. K. Mehrotra, M.A., B.LITT. (Oxon.)

2. Shri Lila Dhar Gupta, M.A.

3. Shri Bene Simlai, M.A.

4. Shri Raghupati Sahai.

Lecturers : Twelve, one part-time teacher and three lady lecturers.**PHILOSOPHY***Professor :* Vacant.*Emeritus Professor :* Dr. D. R. Ranade, M.A., D.LITT.*Reader :* Shri R. N. Kaul, M.A., B.LITT. (Oxon.)*Lecturers :* Four, two lady lecturers and one part-time.**HISTORY***Professor :* Dr. Banarsi Prasad Saksena, M.A., PH.D.*Reader :* Shri O. P. Bhatnagar.*Lecturers :* Seven and one lady lecturer.

Two part-time lecturers.

POLITICAL SCIENCE

Professor : Vacant.

Reader : Capt. Avadh Behari Lal.

Lecturers : Eight and one lady lecturer.

ARABIAN & PERSIAN

Acting Professor : Vacant.

Reader : Dr. Saeed Hussain, M.A., PH.D.

Lecturers : Four, and one part-time teacher.

SANSKRIT

Professor : Dr. Babu Ram Saksena, M.A., D.LITT.

Readers : 1. Shri K. C. Chattopadhyaya.

2. Dr. Umesh Misra.

Lecturers : Two, and one lady lecturer.

URDU

Professor : Vacant.

Reader : Dr Syed Aijaz Husain.

Lecturers : Two, and one lady lecturer. One part-time lecturer.

HINDI

Professor : Dr. Dharendra Varma. M.A., D.LITT.

Readers : Dr. R. K. Varma, M.A., PH.D. & Dr. M. P. Gupta, Kumari
C. Tripathi.

Lecturers : Eight, one part-time teacher and one lady lecturer.

PHYSICS

Professor : Dr. K. Banerji.

Readers : Dr. K. Majumdar.

Dr. G. B. Deodhra, M.SC., D.SC.

Lecturers : Thirteen.

CHEMISTRY

Professor : S. Ghosh, M.SC., D.SC.

Emeritus Professor : Dr. Bawa Kartar Singh, D.SC., SC.D.

Readers : Dr. I. K. Taimuni, M.SC., PH.D.

Sri M. Mehrotra, M.SC.

Dr. J. D. Tiwari, M.SC., D.SC.

Major R. K. Kaul, M.SC.

Dr. Satya Prakash, M.SC., D.SC.

Lecturers : Seventeen Lecturers.

MATHEMATICS

Professor : Dr. P. L. Srivastava, M.A., D.PHIL. (Oxon.)

Readers : Dr. Gorakh Prasad, D.SC.

Dr. B. N. Prasad, PH.D., D.SC.

Shri R. N. Chaudhuri.

Shri Piare Mohan.

Lecturers : Five, and two part-time teachers.

BOTANY

Professor : Dr. Shri Rajan, M.SC., D.SC.

Readers : Dr. R. K. Saksena, D.SC., G. D. Srivastava and Dr. R. N. Tandon.

Lecturers : Eight.

ZOOLOGY

Professor : (Acting) : Dr. H. R. Mehra, PH.D. (Cantab).

Readers : Dr. S. K. Dutt and Dr. M. D. L. Srivastava.

Lecturers : Eight.

COMMERCE

Professor : Shri M. K. Ghosh, M.A., M.COM. (Lond.)

Readers : Shri A. N. Agarwal and Shri D. N. Elhance.

Lecturers : Seven, one part-time for Commercial Law.

ECONOMICS

Professor : Shri J. K. Mehta, M.A.

Readers : 1. Shri P. C. Jain.

2. Shri D. S. Dubey.

3. Shrimati M. M. Thomas.

4. Dr. R. N. Bhargava, M.A., D.LITT.

Lecturers : Ten, one lady lecturer.

LAW

Professor : Shri K. K. Bhattacharya, M.A., LL.M. (Lond.), Bar.-at-Law.

Readers : Shri K. R. R. Shastri, M.A., M.L.

2. Vacant.

3. Shri T. N. Sapru, B.A., LL.B., Bar.-at-Law.

Lecturers : Six, and three part-time teachers.

EDUCATION

Reader-in-Charge : Shri P. S. Naidu, M.A.

Lecturers : Two, and one lady teacher.

GEOGRAPHY

Professor : Dr. R. N. Dubey, M.A., PH.D.

Lecturers : Three.

CHINESE

Lecturer : Dr. Chou Hsiang Kuang.

FRENCH & GERMAN

Lecturer : Dr. A. K. Mitra (French).

RUSSIAN

Lecturer : Shri Suresh Chandra Sen Gupta.

LOCAL SELF-GOVERNMENT

Two part-time teachers.

MILITARY SCIENCE

Reader-in-Charge : Lt. Col. S. G. Tiwari.

Lecturers : Three.

PHOTOGRAPHY

Instructor : Shri M. P. Gupta.

SOCIAL SERVICE

Teacher-in-Charge : Dr. S. P. Naithani, M.SC., PH.D.

PAINTING

In Charge : Shri R. N. Deb, M.A

Instructors : Shri K. Majumdar.

Shri D. T. Dhulia.

MUSIC

In Charge : Dr. Babu Ram Saxena, M.A., D.LITT.

Lecturers : Shri U. S. Kochak, M.SC., B.MUS. and Shri P. R. Battacharya.

Instructors : 1. Shri B. S. Pathak and three part-time teachers.

2. Shri N. A. Joshi.

3. Shri S. R. Mawalanker.

4. Shri S. R. Bhat.

HOME ARTS AND SCIENCE (For Girls)

Lecturers : Dr. K. D. Vyas, B.SC., M.B., B.S.

Dr. (Mrs.) Radha Pant, M.SC., PH.D.

Shrimati B. Dey, B.A., L.T.

Shrimati B. Neogi.

PHYSICAL TRG. STAFF*Instructors* : Two.

Sri H. Mukerji, Supt., Physical Education.

WORKSHOP TRG. CLASS*Instructor* : One.*Colleges of the University.*

Canon Holland University College—*Principal* : Dr. C. M. Chatterjee, M.A.,
PH.D.

Kayastha Pathshala University College—*Principal* : Dr K. R. Saksena,
M.A., D.LITT.

Allahabad Agricultural Institute—*Principal* : Sri H. S. Azariah, M.A.

Constitution of the University

The authorities of the University are: The Court, the Executive Council, the Academic Council, the Committee of Reference and the Faculties. The Committee of Reference is empowered to deal with items of new expenditure of Rs. 3,000 or over in the case of recurring expenditure and of Rs. 10,000 or over in the case of non-recurring expenditure. There are Women's Advisory Board, Physical Education Board, Muslim Advisory Board, and Board of Residence, Health and Discipline.

**Number of Students in the University under
Different Faculties**

The number of students during the year 1954-55 was :

			<i>Men</i>	<i>Women</i>
Faculty of Arts	..	..	3,166	616
„ Science (including Agriculture)	..	..	1,107	73
„ Law .. .. .	..	..	803	—
„ Commerce .. .	..	..	623	14
			—	—
			5,704	703
			—	—
Grand Total	..	..	6,407	
			—	

Number of Successful Students in the Different Examination

The number of students who have passed the University Examinations of 1955 is shown below :

B.A.	..	1,023
B.A. (Home Arts for Girls only)	..	2
B.Sc.	..	333
B.Sc. (Home Sciences for Girls only)	..	3
M.Ed.	..	29
M.A. (Prev.)	..	460
M.A. (Final)	..	430
M.Sc. (Prev.)	..	174
M.Sc. (Final)	..	143
D.Litt.	..	Nil
D.Phil.	..	—
LL.B. (Prev.)	..	246
LL.B. (Final)	..	210
B.Com. (Part I)	..	123
B.Com. (Part II)	..	145
M.Com. (Prev.)	..	54
M.Com. (Final)	..	61
B.Sc. Agr.	..	65
B.Sc. Agr. Engr. (Previous)	..	22
B.Sc. Agr. Engr. (Final)	..	18
LL.M.	..	1
L.S. G.D.	..	30
Total		3,572

Scholarships and Medals

The University awards a certain number of Research Scholarships to M.A.'s and M.Sc.'s annually. They are of the value of Rs. 50 per month each and are tenable for a period of one year. The University also awards annually two Scholarships of Rs. 20 per month and four of Rs. 15 per month each tenable for one year to post-graduate women students and medals to the students who do best at the B.A., B.Sc., and B.Com. Examinations. It also awards one D.Litt. Scholarship and one D.Sc. Scholarship, each of the value of Rs. 100 per month, six M.A. Scholarships of the value of Rs. 30 per month each, six M.Sc. Scholarships of the value of Rs. 30 per month each. The period of tenure of each of these Scholarships is two years.

The following are the endowed Scholarships and Medals in the University :—

Queen Empress Victoria Jubilee Medal.—(Capital value Rs. 1,000) : Two silver medals are awarded to the two most successful students in the M.A. and B.A. Examinations in one year and two most successful students in the M.Sc. and B.Sc. Examinations in the next year.

Iqbal Medal.—(Capital value Rs. 1,500) : A gold medal is awarded to the first Muhammadan student at the B.A. Examination.

Sir Charles Elliot Scholarship.—(Capital value Rs. 6,000) : One Scholarship of the value of Rs. 17-8-0 per month tenable for one year is awarded annually to a B.Sc. who wishes to prosecute his studies further.

Griffith Memorial Fund Scholarships.—(Capital value Rs. 7,600) : Two Scholarships and certain prizes are awarded to students who actually study in the Sanskrit College, Banaras.

Lumsden Memorial Scholarships and Gold Medal.—(Capital value Rs. 9,400) : One Scholarship of the value of Rs. 8 per month tenable for one year is awarded in one year to the student who has stood first in Sanskrit at the Intermediate Examination and in the next year to the student who has stood first in Arabic at the same examination. A gold medal of the value of Rs. 50 is also awarded every year to the LL.B. candidate who stands first

Swarnamayi Uma Charan Prize.—(Capital value Rs. 1,000) : A prize of the value of Rs. 35 is awarded to the B.Sc. student who stands first.

Lala Sanwal Das Stipends.—(Capital value Rs. 24,900) : Four stipends of the aggregate value of Rs. 50 per mensem are awarded only to Khattri or Saraswat Brahman students in the Intermediate and B.A. classes.

Himangini-Bhuvaneswari Book Prize.—(Capital value Rs. 1,000) : Annual Book Prize to the candidate who stands first in Sanskrit in the Intermediate Examination.

Empress Victoria Readership.—(Capital value Rs. 1,36,000) : The value is Rs. 100 per mensem. It is tenable for three years for researches in Science.

Kamta Prasad Research Scholarships.—(Capital value Rs. 51,600) : Two Scholarships of the value of Rs. 100 per mensem each for two years for Hindus, preferably of the Vaish community.

Besides these there are also the following Prizes and Scholarships :—

Ward Vidyant and Cox Vidyant Memorial Gold Medals.—(Capital value of Rs. 3,000) : Two gold medals to be called the Ward Vidyant Memorial Gold Medals are awarded every year to the best students in the M.Sc. and B.Sc. Examinations in Physics and one gold medal to be called the Cox Vidyant Memorial Gold Medal is awarded every year to the best student in the M.A. or M.Sc. Examination in Mathematics.

Harrison Memorial Gold Medal.—(Capital value Rs. 1,000) : One gold medal is awarded to the best student who stands highest in the M.A. or M.Sc. or other higher Examination of the University in alternate years in English and Mathematics.

Srimati Leila Sukhadharshni Atal Scholarships.—(Capital value Rs. 5,200) : Two Scholarships of Rs. 9 per month each for lady students available in the 1st and 2nd year of B.A. and B.Sc. classes respectively on the results of the Intermediate Examination.

Shrimati Sharat Kumari Dasi Scholarship and Prize.—(Capital value Rs. 5,000) : (a) a Post-graduate Scholarships of Rs. 20 per month tenable for 10 months, awarded every year to the best student in Mathematics and (b) a book prize to the best Mathematics student.

Sri Krishna Kaul Memorial Gold Medal.—(Capital value Rs. 1,250) : A gold medal is awarded to the student who stands first in Political Science at the B.A. Examination.

P. Seshadri Gold Medal.—(Capital value Rs. 1,000) : A gold medal is awarded to the student of the University who writes the best Essay in English.

The Maharajadhiraja Rameshwara Singh Bahadur of Darbhanga Lecturership.—(Capital value Rs. 18,000) : A Lecturer shall be appointed every alternate year on an honorarium of Rs. 1,000 to deliver at the University a course of at least four lectures on a subject bearing on Indian Life and Thought.

Sir Henry Richards Gold Medal ; Homersham Cox Medal ; Dr. Kally Das Nundy Thakomony Medal ; Hariprava Medal ; Ram Mohan De Medal ; Mahendra Nath Dutt Medal ; General Ali Asghar Khan Scholarships ; Tirthanatha Jha Scholarship and Ramakashi Devi Gold Medal ; Vizianagaram Scholarships ; Nawab Ali Asghar Khan's Arabic Scholarships ; Rampur Scholarships ; Purushottamji Scholarships ; Peary Mohan Banerji Gold Medal ; Nilkamal Mitra Gold Medal ; Moulvi Haider Husain and Choudhri Dhian Singh Prize ; Dr. E. G. Hill Memorial Prize ; S. A. Hill Memorial Prize ; Chintamani Ghosh Medals, Muir College Fund Prize ; Professor Dunn Medal ; Bhagbhari Handoo Prize ; Sashilata Virabhadra Jha Gold Medal ; Purshottam Krishna Scholarship and Pandit Kanhaiya Lal Gold Medal ; Khajurgaon Raj Gold Medal ; and Awadhwasi Sita Ram Gold Medal ; Prof. A. C. Mukerji Gold Medals ; Gauri Shankar Chatterji Book Prize ; Pundrik Ray Bakshi Book Prize ; Naimi Arabic Scholarship ; Pt. Bhagwan Din Dube Gold Medal ; Miss Munni Gurtu Gold Medal ; Dr. P. D. Banerji Endowment Fund ; Dr. R. N. Bhatia Endowment Fund ; Priyamvada Asthana Gold Medal Endowment Fund ; Triloki Nath Ram Priya Asthana Pureskar ; Shri Vilas Scholarship Endowment Fund ; Baldeo Ram Dave Scholarship Fund ; Babu Bal Bhadra Prasad Art Collection Fund ; Sastry Medal Endowment Fund ; Dr. L. C. Jain Endowment Fund ; Jha Endowment Fund ; Dr. Bhavadeo Mukerji Gold Medal

Endowment Fund; Ushalata Mukerji Gold Medal Endowment Fund; Raja Panna Lal Endowment Fund; Sukhia Endowment Fund; K. P. Chatterji Medal Fund; Shanti Dantyagi Scholarship, Brij Rani Kunwar Scholarship, Daya Shankar Dube Endowment Fund; Ganga Pd. Upadhyaya Endowment Fund; Ishwar Narain Kichlu Gold Medal Endowment Fund; Man Singh Endowment Fund; Mohan Shyam Endowment Fund; N. R. Dhar Endowment Fund; Nepal Chaii in Asian History and Culture, Nagendra Nath Rakshit Bengali Essay Prize Endowment Fund; Nand Rani Medal Endowment Fund; Pushpa Khanna Prize Endowment Fund; Lala Puttupal Medal Endowment Fund; Munshi Raja Bahadur Endowment Fund; Dr. Ram Saran Das Memorial Fund; R. C. Chaudhuri Memorial Silver Medal Endowment Fund; Saraswati Varma Dramatic Cup Endowment Fund; Balmukand Jain Medal Endowment; Sastri Medal Endowment; Allahabad Jubilee Scholarships, Bansi Lal Gold Medal; Shrimati Lalita Devi Memorial Medal; P. Ajit Pd. Memorial Gold Medal Endowment; Prof. Rudra Gold Medal Endowment; Santosh Kumar Singh Memorial Gold Medal Endowment; Hari Krishan Gold Medal, Shrimati Lakshmi Devi Memorial Gold Medal Endowment; Parsadi Lal Gold Medal Endowment.

Library, Museums, Laboratories, etc.

There is a general Library. At the end of the year 1953-54 there were 1,57,625 volumes in it.

There is a Coin Museum in the Library building. There are also departmental libraries for the use of teachers and a Laboratory is attached to each of the Departments of Physics, Chemistry, Botany and Zoology. There is also a Museum attached to the Commerce Department. An Art Gallery has also been opened.

Provision for Research

The University Act of 1921 makes it one of the duties of the University to arrange for the carrying on of independent research and this duty is discharged by provision of research scholarships in the different departments of study. The teachers also carry on research and contribute papers to the leading scientific journals. The University itself publishes *University Studies*, which is a record of research work carried on in the University.

The number of University research scholarships sanctioned for 1953-54 is as follows:

History Department	..	..	..	..	1
Economics Department	..	..	..	..	1
Sanskrit Department	..	..	..	..	1
Hindi Department	..	..	..	..	1

Persian and Arabic Department	..	..	..	1
Urdu Department	..	..	..	1
Philosophy Department	..	..	..	1
Politics Department	..	..	..	1
Commerce Department	..	..	..	1
Physics Department	..	..	..	1
Chemistry Department	..	..	..	1
Zoology Department	..	..	..	1
Botany Department	..	..	..	1
Mathematics Department	..	..	..	1
Total				14

The University has a Provident Fund to which every officer or servant of the University holding a substantive appointment of Rs. 30 per mensem or upwards, is required to subscribe at the rate of 8 per cent of his salary, the University contributing at the rate of 12 per cent in the case of subscribers drawing a salary of Rs. 500 or less, 10 per cent in the case of subscribers drawing a salary of more than Rs. 500 but not exceeding Rs. 1,000 and 8 per cent in the case of subscribers drawing a salary of over Rs. 1,000. Those getting below Rs. 30 per mensem are required to contribute at 0-1-0 per rupee of their pay, the University contributing an equal amount.

Women's Educations

Arrangements have been made for giving both formal and tutorial teaching to women students of the B.A. classes separate from men at the Women's Department of the University. The number of lady lecturers sanctioned for the purpose is ten.

Provision for Safeguarding Health, Medical Inspection, Discipline, etc.

The Board of Residence, Health and Discipline of the University is vested with the power of dealing with all matters concerning the residence, health and discipline of University students. The constitution and powers of the Board are defined in Chapter VIII of the University Calendar. Two Medical Officers of the University are in charge of the Colleges of the University and the Hostels and are required to undertake the medical examination of all the University students. The University has a dispensary with indoor beds for the benefit of its students and an Isolation Ward.

The University grants in Arts, the B.A. Degree (Pass) and the Master's Degree in Education, the B.Sc. Degree (Pass) the B.Sc. (Ag.) and B.Sc. (Ag.) Engineering and B.Sc. special course for Women and

the Master's Degree. The Professional Degrees and Diplomas are Master of Commerce, Bachelor of Commerce, Bachelor of Laws and Master of Laws. D.Litt., D.Sc., D.Phil., and LL.D. are the Doctor's Degrees.

Admission to Courses of Study

Admission to a course of study for the Bachelor's Degree is granted only to those who have passed the Intermediate Examination of the Board of High School and Intermediate Education of the Uttar Pradesh or of any University in Indian Union incorporated by any Law for the time being in force or any examination recognised as equivalent thereto. The Higher School Certificate Examination of the Cambridge University, the Intermediate Examination of the Mysore University and the Preliminary Examination of the Mayo College, Ajmer, have been recognized as equivalent to the Intermediate Examination of the Board of High School and Intermediate Education, U.P. The Intermediate Examination of the Rajputana Board of High School and Intermediate Education and the Intermediate Examination of the Dacca Board of Intermediate and Secondary Education have also been so recognised, the latter subject to certain conditions. The final Examination for the full course certificate of the Government Commercial Institute, Calcutta, after passing the Matriculation or any equivalent examination of any University or Board established by Law in India has also been recognized as equivalent to the Intermediate Examination for admission to B.A. class. A student who has (1) passed any of the following examinations: the Fazil Examination in Arabic or Kamil Examination in Persian conducted by the Education Department of the Uttar Pradesh, the Acharya Examination of the Government Sanskrit College or of the Banaras Hindu University, the Dabir Kamil or Fazil Examination of the Lucknow University, the Acharya Examination of the Jaipur State, the Ratna Examination of the Hindi Sahitya Sammelan, the Shastri or Maulvi Fazil or Munshi Fazil Examination of the Punjab University, the Saraswati Examination of Prayag Mahila Vidyapith and (2) has also passed in English the Intermediate Examination of the U. P. Board of High School and Intermediate Education will be eligible for admission to the University and after a regular course of study extending over two academic years will be eligible to appear at the B.A. Examination in English only. If successful he will be granted certificate of having passed the examination in English only. Admission to post-graduate classes is allowed to graduates of this University or of any other University in the Indian Union recognized by the law of the place in which it is situated or of any University which may from time to time, be recognized for this purpose. The Mysore University has been so recognized so far. Admission to B.Com. classes is granted to those who have passed the Intermediate Examination of the U.P. Board with Economics or Intermediate Examination in Arts and Science of the Andhra University with Banking, Accountancy and Commercial Geography as their subjects or any University in India established by Law.

the Commercial Diploma Examination of the Allahabad University or of the Board of High School and Intermediate Education, U.P., or the Intermediate Examination in Commerce of the U.P. Intermediate Board or have passed certain higher examinations. Graduates in Commerce are eligible for admission to the M.Com. class. Admission to the B.Sc. class in Agriculture is granted to those who have passed the Intermediate Examination in Agriculture of the U.P. Board of High School and Intermediate Education or the First Examination in Agriculture of the Punjab University or the Intermediate Examination of the Nagpur University

Courses of Study in Arts

Bachelor of Arts B.A. (Pass).—The course of study extends over two academic years and there shall be two examinations, one at the end of the first academic year and the other at the end of the second academic year, and they shall be known as B.A. (Pass) Part I Examination and B.A. (Pass) Part II Examination respectively. Class shall be awarded on the total number of marks obtained by a candidate in Part I and Part II Examinations, candidates are required to study and be examined in Compulsory English and any three of the following branches:—

(a) English Literature, Arabic, Persian or Sanskrit, Hindi or Urdu, (b) Mathematics, (c) Philosophy, (d) Economics, (e) History. (f) Ancient History, Culture and Archaeology, (g) Geography, (h) Politics, (i) Military Science, (j) Indian Music, and (k) Education. The Examination in Compulsory English consists of two general papers and a *viva voce* and that in English Literature of three special papers. Three papers are set in each of the Classical Languages and in Mathematics. two papers each in Philosophy, Economics, Politics, History, Geography and Military Science, a Practical Test in Military Science and Geography and three papers each in Urdu and Hindi.

The minimum for a pass in all subjects is 33 per cent, of the aggregate.

Master of Arts (M.A.).—The course of study extends over two years. The examination consists of two parts—the M.A. (Previous) Examination held at the end of the first year and the M.A. (Final) Examination held at the end of the second year. A candidate may select one of the following subjects—Languages: (1) English, Sanskrit, Arabic, Persian, Urdu or Hindi, (2) Mental and Moral Science, (3) History, (4) Ancient History, Culture and Archaeology, (5) Mathematics. (6) Economics, (7) Political Science, (8) Diplomacy and International affairs, and (9) Geography.

At the M.A. (Previous) Examination there are four papers in English Literature, Sanskrit, Arabic, Persian, Hindi, Urdu, Politics, History, Ancient History, Culture and Archaeology, Mathematics, and Mental and

Moral Science and five papers in Economics. There is also a *viva voce* examination in all the subjects except in *Geography and Mathematics*. For the Final Examination five papers are set in *English Literature and Mathematics*, and four papers in *Arabic, Persian, Sanskrit, Hindi, Urdu, Economics, History, Politics, and Mental and Moral Science*. Of the four papers in *Sanskrit*, one is on composition and the other three on texts in one of the following groups: (a) *Vedic Language and Literature*, (b) *Sanskrit Language and Literature*, (c) *Dharma Shastra*, (d) *Philosophy*, (e) *Epigraphy and History*. (f) *Pali and Prakrit*. There is a *viva voce* at the Final Examination in all the Subjects except *Mathematics*.

The minimum pass marks in all the subjects are 36 per cent

Science Faculty

Bachelor of Science B.Sc.—(Pass).—The course of study extends over two academic years. There shall be two examinations, one at the end of the first academic year, and the other at the end of the second academic year; and they shall be known as *B.Sc. (Pass) Part I Examination* and *B.Sc. (Pass) Part II Examination* respectively, and candidates must study and be examined in either of the following groups of subjects: (a) *Physics, Chemistry and Mathematics*, (b) *Chemistry, Botany and Zoology*, (c) *Geography, Botany and Zoology*, (d) *Physics, Mathematics and Military Science*, (e) *Mathematics, Chemistry and Military Science*, (f) *Chemistry, Military Science and Botany or Zoology*, (g) *Military Science, Botany and Zoology*. There are two papers and a practical examination in each subject except *Mathematics* in which three papers are set. A candidate may, at his option, take *General English* as an extra subject in which there are two papers and a *viva voce*, but the marks in *General English* do not count towards the aggregate.

The minimum for a pass in each Science subject and also in *English* is 33 per cent., and 33 per cent. in the aggregate. A candidate is required to pass in *Theory and Practical* separately in *Part I* as well as in *Part II* Examinations.

Students for the *Pass Course* may be transferred to the *Honours Course* within three months of the first year of study on the recommendation of the Head of the Department and from *Honours Course* to *Pass Course* within first six months of the first year of study.

Pass Degree of Bachelor of Science (for women candidates only).

1. Courses of Study for the *B.Sc. (Pass)* degree shall extend over a period of two academic years and there shall be two examinations, one at the end of the first academic year, and the other at the end of the second academic year; and they shall be known as *Bachelor of Science (Home Sc.) Part I Examination* and *Bachelor of Science (Home Sc.) Part II Examination* respectively.

2. A candidate who has attended a regular course of study in the University for this degree shall be permitted to appear at the examination.

3. Every candidate shall be required to pass in the following group of subjects.

(i) *Science.*

Paper I. (a) Elementary Chemistry and (b) Elementary Bio-Chemistry.

Paper II. Bacteriology and Hygiene.

Paper III. Human Physiology including Food and Nutrition.

(ii) *Sociology.*

Paper I. General Principles of Economics.

Paper II. Psychology.

(iii) *Household Arts.*

A. *Home Decoration.*

Paper I. Principles of Arts and Design.

Paper II. Textiles.

Or B. *Music.*

Paper I. Theory.

Paper II. Practical.

Or C. *Painting.*

Paper I. Theory.

Paper II. Practical.

4. A candidate may, at her option, take Compulsory English as an extra subject. The marks obtained by the candidate shall not be counted towards her aggregate and the class obtained by her in Compulsory English shall be indicated in her diploma and notified in the Gazette.

Regulations

I. 1. The examination for the degree of Bachelor of Science shall be by means of papers; but candidates shall be required to undergo a practical examination where specifically provided.

Candidates shall be required to pass separately in the practical examinations.

2. The names of successful candidates shall be arranged in three classes. Candidates who obtain 60 per cent. of the aggregate marks or above shall be placed in the first class. Candidates who obtain 48 per cent. or more, but less than 60 per cent. of the aggregate marks, shall be placed in the second class. Candidates who obtain 33 per cent. or more, but less than 48 per cent. of the aggregate marks shall be declared to have passed in the third class. The names shall be arranged in alphabetical order within the classes.

3. Candidates must obtain at least 33 per cent. of the total marks in each subject.

4. The examination in Compulsory English shall be the same as for the B.A. degree.

II. Add the following to Ordinance 3 of Chapter XXXIV—Page 265, Calendar, 1944.

Women students who have passed the Intermediate Examination of the Board of High School and Intermediate Education of the Uttar Pradesh or of any Board or University in Indian Union incorporated by any law for the time being in force, or any examination recognised by the Academic Council as equivalent thereto, with Chemistry ; or Biology ; or Physiology ; Hygiene and Elementary Psychology ; or Home Economics ; or Household Science ; or who have passed the Intermediate Examination in any subject, provided they had passed the High School Examination with Science (Physics and Chemistry) or General Science (Physics, Chemistry and Biology), may be admitted to the course for the B.Sc. (Pass) Degree (for Women only).

B.Sc. Pass Examination (for Women only).

I. Science.

Paper I. Elementary Chemistry and Elementary Biology.

Paper II. Bacteriology and Hygiene.

Paper III. Physiology (including Food and Nutrition).

Practical Elementary Chemistry and Elementary Biology Chemistry.

Practical in subjects of Paper II and III.

II. Sociology.

Paper I. Elementary Economics.

Paper II. Psychology.

Household Arts.

A. House Decoration.

Paper I. Art and Design.

Paper II. Textiles.

Practical. Music and Painting, both Theory and Practical.

Bachelor of Science (Ag.).—The course of study extends over a period of two academic years. Candidates are required to study (1) Agriculture (including Agricultural Engineering and Veterinary Hygiene), (2) Agricultural Chemistry, (3) Agricultural Botany, and (4) Agricultural Zoology. The minimum for a pass is 33 per cent in each subject and 33 per cent in the aggregate. Candidates shall be required to pass separately in the written as well as in the practical examination of each subject.

Bachelor of Science (Agricultural Engineering)

The Examination for the degree of B.Sc. (Ag. Engr.) shall be open to any candidate who has passed the Inter. Examination in Agr. of the Board of High School and Inter. Education, U.P., or any other examination in Agr., recognised by the University as equivalent thereto. (B.Ag. Degree of Dacca University or B.Sc. Agr. Degree of Madras, Mysore, Andhra, Bombay and Nagpur Universities and B.Sc. Examination in Agr. of the Osmania, Punjab, Patna and Gauhati Universities has also been recognised for purpose of admission to this course).

The course of study for the B.Sc. (Ag. Engr.) pass degree shall extend over a period of three academic years, with a previous University examination at the end of the first year and final University examination at the end of the third year.

A candidate who has attended a regular course of study in the University for this degree, for one academic year, may be admitted to the Previous Examination in Agricultural Engineering.

A candidate who after passing the Previous Examination, has completed a regular course of study in the University for two academic years, may be admitted to the Final Examination for the degree of Bachelor of Science in Agricultural Engineering.

The Examination for the degree of B.Sc. (Ag. Engr.) shall consist of two parts :—

- (a) The Previous Examination, and
- (b) The Final Examination.

Every candidate for the Previous Examination shall be required to pass in the following subjects :—

- (1) Mathematics, Applied Mechanics, and Advanced Shopwork.
- (2) Electricity, Heat Engines and Drawing.
- (3) Soil and water Conservation, Irrigation and Drainage, and Surveying.

Every candidate for the Final Examination for the Degree of Bachelor of Science in Agricultural Engineering shall be required to pass in the following subjects :

- (1) Farm Machinery, Mechanisms, and Farm Management.
- (2) Materials of Construction, Structural Design, Machine Design, Advanced Shopwork, and Engineering Drawing.
- (3) Hydraulics and Irrigation and Drainage Soil and Water Conservation, Agricultural Structure, and Electricity.

The Previous and Final Examinations for the Degree of B.Sc. (Ag. Engr.) shall be by means of papers, but candidates shall be required to undergo practical examinations as shown in the scheme of examinations.

Candidates shall be required to pass separately in the written as well as in the practical examination in each subject.

The names of successful candidates both for Previous and Final Examinations shall be arranged in three classes:—

FIRST CLASS: 70 per cent. or more of the aggregate marks.

SECOND CLASS: 60 per cent. or more, but less than 70 per cent. of the aggregate marks.

THIRD CLASS: 50 per cent. or more but less than 60 per cent. of the aggregate marks.

In order to pass, candidates shall be required to obtain at least 33 % in each written paper and 40% in each practical examination and 40% marks in the aggregate of each group of subjects and 50% marks in the aggregate of the whole examination. For the purpose of this regulation Papers I and II in Mathematics for the Previous Examination are together considered as one paper.

Master of Science (M.Sc.).—The course of study extends over two years after graduation and the examination consists of two parts—the Previous and the Final—held at the end of the first and the second year respectively. Candidates must offer one of the following subjects: (a) Mathematics, (b) Physics, (c) Chemistry, (d) Zoology, and (e) Botany, (f) Agricultural Botany, (g) Agricultural Zoology. At the Previous Examination, there are three papers and a practical examination in Physics, Botany and Chemistry, four papers and practical examination in Zoology, and four papers in Mathematics. In mathematics the examination consists of the B.Sc. Examination papers in the branch of Mathematics in which the Honours candidates do not proceed for the M.Sc. Degree. At the Final Examination, five papers are set in Mathematics, four papers in Zoology and two papers in Physics, Botany and Chemistry; with a practical examination in each subject except Mathematics.

The minimum for a pass is 36 per cent in each subject.

Ordinances for the Degree of Master of Science in Technology

1. The examination for the degree of Master of Science in Technology shall consist of three parts, viz.,

- (a) M.Sc. (Tech.) Part I
- (b) M.Sc. (Tech.) Part II
- (c) M.Sc. (Tech.) Part III

2. (a) A candidate, who after passing the B.Sc. examination of this University or any other recognised University in Physics and Mathematics as two of his optional subjects, has completed a regular course of study for not less than one academic year in the University may be admitted to the M.Sc. (Tech.) Part I Examination.

(b) A candidate, who after passing the M.Sc. (Tech.) Part I Examination of this University, has completed a regular course of study for not less than one academic year in the University may be admitted to the M.Sc. (Tech.) Part II Examination.

(c) A candidate, who after passing the M.Sc. (Tech.) Part II Examination of the University has completed a regular course of study for not less than one academic year in the University may be admitted to the M.Sc. (Tech.) Part III Examination.

3. A candidate, successful at the M.Sc. (Tech.) Part III Examination will be admitted to the M.Sc. (Tech.) degree provided he has, at some stage (a) passed the Diploma examination in any of the following languages :—

(a) German.

(b) French.

(c) Russian.

and further (b) has undergone practical training in a recognised professional institution or an approved factory for at least three calendar months.

Regulations

1. The examinations for the M.Sc. (Tech.) Part I, Part II and Part III shall be by means of papers, but the candidates shall be required to undergo practical examination also. Candidates shall be required to pass separately in the practical examination.

2. A candidate who obtains 45 per cent in each subject and 48 per cent of the aggregate marks in theory papers and practical separately at the M.Sc. (Tech.) Part I, Part II and Part III examinations shall be declared to have passed the respective examinations.

3. The names of the candidates, successful at the M.Sc. (Tech.) Part III examination, shall be arranged in the following classes :—

(i) **FIRST CLASS** : 60% or more on the aggregate marks of all the three examinations.

(ii) **SECOND CLASS** : 48% or more of the aggregate marks of all the three examinations.

Bachelor of Commerce (B.Com.).—The course of study extends over two years and is open to students who have passed one of the following examinations: Commercial Diploma of a University or of the Board of High School and Intermediate Education, U.P., the Intermediate Examination in Commerce of the same Board; Bachelor of Arts with Econo-

mics; Previous Master of Arts in Economics of the University, Master of Arts Examination of any University; the Intermediate Examination in Arts and Science of Andhra University with Banking and Accountancy and Commercial Geography; the Intermediate Examination with Economics; and the Final Examination for the full course certificate of the Government Commercial Institute, Calcutta. The examination is ordinarily divided into two parts; Part I being taken at the end of the first year and Part II at the end of the second year, or it may be taken entirely at the end of the second year under certain conditions.

The following are the subjects to be studied in the first year class :

(1) (a) Commercial and Industrial Organisation. (b) Accountancy, (c) Commercial Law; (2) (a) Principles of Economics and Public Finance, (b) Currency and Banking, (c) Economic and Commercial Geography. One paper is set in each of the subjects.

The subjects to be studied in the second year class are : (1) English including one paper on Essay on a subject of commercial or economic interest; (2) (a) Statistics, (b) Economic Development of U.S.A., Great Britain, Germany and Japan, (c) Indian Industries, Trade and Transport; (3) One of the following groups, (2) papers; (a) Advanced Accountancy and Auditing, (b) Advanced Banking and Foreign Exchange; and Law and Practice of Banking, (c) Industrial and Commercial Law, Secretarial Work and Practice, and (d) Public Finance and Administration, (e) Economics of Transport and Law of Carriage by Railways and Organization of Transport, (f) Life Assurance and Property Insurance, (g) Actuarial Science, (h) Rural Economics and Co-operation, (i) Salesmanship and Advertising, and (j) Inland and Foreign Trade.

One paper is set in each of the subjects, except in English, and those under (3) in which two papers are set in each subject. There is also a *viva voce* examination in English on a commercial subject.

The minimum for a pass is 33 per cent. in each subject or group of subjects and 40 per cent in the aggregate. For a position marks of the two examinations, Parts I and II count together for place on the Pass List of the Final Year.

Ordinances for the Degree of Master of Commerce

1. A candidate who, after passing the examination for the degree of Bachelor of Commerce, has completed a regular course of study in the University for one academical year shall be admitted to the Previous Examination for the degree of Master of Commerce.

2. A candidate who, after passing the M.Com. (Previous) Examination, has completed a regular course of study for one academical year in the University, shall be admitted to the Final Examination for the degree of Master of Commerce.

3. The Examination for the degree of M.Com. shall comprise two parts :—

M.Com. (Previous).—A written examination in four selected subjects.

M.Com. (Final).—A thesis or a dissertation on a problem relating to Indian Commerce, Industries, Finance or Transport.

M.Com. (Previous).—Written Examination: The written examination shall comprise four papers of three hours each. The candidates may offer any four of the following subjects on each of which one paper will be set: (1) The Organization of Industries in India, (2) Corporation Finance, (3) The Organization of Markets, (4) International Banking and Foreign Exchange, (5) International Trade and Fiscal Policy, (6) Transport, (7) Insurance, (8) Economics of Agriculture with special reference to India (Rural Economics), (9) Co-operation.

M.Com. (Final).—The Thesis: Every candidate for the M.Com. (Final) Examination shall submit along with his application three printed or type-written copies of a thesis on some problem concerning Indian Commerce, Finance, Transport or Insurance or any other allied subject approved by the Committee of Courses and Studies in Commerce* and shall in footnotes or preface quote precise reference to published works or reports on which he has relied for his facts and figures.

4. A candidate for the M.Com. (Final) Examination shall pursue his research at Allahabad under the superintendence of a member of the teaching staff to be nominated by the Head of the Department of Commerce.

5. He shall pursue his research at Allahabad unless the Vice-Chancellor, on the recommendation of the Head of the Department of Commerce, gives him leave of absence for ordinarily not more than three months on the ground that it is in the interest of his research that he should work elsewhere.—

Under Chapter XLVII, the following be added under the standard of Examination para. 4 :—

M.Com. Examination (Previous)

Each paper—100 Marks	{ Minimum pass marks 36 per cent. of the aggregate marks, in the Previous Examination.
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N.B.—No student will be allowed to take up a subject in which instruction is not provided.

* The candidate must select the subject for this thesis within three months of his admission to the M.Com. Previous class in consultation with the Head of the Department for the sanction of the same by the Committee of Courses and Studies in Commerce in time.

M.Com. Examination (Final)—Thesis

External Examiner—250 Marks

Internal Examiner—150 Marks

Viva voce on General Commercial

Knowledge—100 Marks

{ Minimum pass marks 36 per cent.
of the aggregate marks.

Note.—Marks of the two examinations, Previous and Final will be added to determine the position on the Pass List of the Final Year.

1st Class—60 per cent. and over.

2nd Class—48 per cent. and above.

3rd Class—36 per cent. and above.

Bachelor of Laws (LL.B.).—The course of study extends over two years and is open to graduates in Arts, Science, Commerce and Agriculture. The Examination consists of two parts—the Previous and Final—held at the end of the first and second years respectively. The subjects for the Previous Examination are: (1) Roman Law, (2) The Law of Contracts except the Law of Partnership, (3) The Law of Easements and Torts, (4) The Law of Evidence, (5) Criminal Law and Procedure, (6) Constitutional Law and Administrative Law and (7) Hindu Law. The following are the subjects for the Final Examination: (1) Civil Procedure including Limitation, (2) The Law relating to the Land Tenures, Rent and Revenues, (3) The Law of Partnership and of Companies, (4) Muhammadan Law, (5) The Law relating to Transfer of Property, (6) Equity with special reference to Trusts and Specific Relief, (7) Jurisprudence, and (8) Public International Law

The examination is conducted by papers. The minimum for a pass is 30 per cent. in each subject and 50 per cent. in the aggregate.

Master of Laws (LL.M.).—The LL.M. Examination is open to Bachelors of Laws of the Allahabad University of at least two years' standing or of any other University to which Ordinance 4 of Chapter XXX applies. Candidates are required to offer four compulsory and two optional subjects. The compulsory subjects are (1) Jurisprudence and Principles of Legislation, (2) Constitutional Laws; British and Indian, (3) Equity, and (4) either (a) Hindu Law or (b) Muhammadan Law. The following are the optional subjects: (1) Muhammadan Law or Hindu Law whichever is not chosen as a compulsory subject, (2) Law of Contracts, (3) Transfer of Immoveable Property and Easements, (4) Roman Law, (5) International Law, Public and (6) International Law, Private.

The examination is conducted *viva voce* and by written papers. Candidates obtaining 40 per cent. in each subject and not less than 60 per cent. on the whole are declared successful in the First Class, and candidates obtaining 40 per cent. in each subject and 50 per cent. on the whole in the Second Class.

Doctorates

Doctor of Philosophy, Arts (D.Phil.).—A candidate for the Degree of Doctor of Philosophy must be either (1) a Master of Arts of this University or (2) a Master of Arts of any other University recognised by this University.

Every candidate shall pursue as a student of the University a course of research of not less than 20 months' duration.

Note.—A teacher of this University shall be considered to be a student for the purpose of this Ordinance.

He shall pursue his research at Allahabad unless the Vice-Chancellor, on the recommendation of the supervisor, gives him leave of absence for ordinarily not more than one year on the ground that it is in the interest of his research that he should work elsewhere.

After the thesis is completed the candidate shall supply five printed or typed copies of his thesis, which shall comply with certain conditions.

If the majority of examiners report that the thesis is satisfactory, the University shall arrange for the *viva voce* examination.

If the *viva voce* examiners are also satisfied, the recommendations of the thesis and *viva* examiners shall be placed by the Research Degree Committee before the Faculty for necessary action.

Doctor of Letters (D.Litt.).—A candidate for the Degree of Doctor of Letters must be either (1) (a) a Doctor of Philosophy of this University of at least two years standing, or (b) a Master of Arts of this University of at least seven years' standing, or (2) (c) a Master of Arts of at least seven years' standing of a University recognised by this University, who has resided at the University for at least one year, or (d) a Doctor of Philosophy of another University recognised by the Allahabad University who has resided at the University for at least one year. Candidates under (b) and (c) must satisfy the Faculty that the work already done by them is of sufficient merit to earn exemption from the D.Phil. Degree.

Every candidate who intends to supplicate for the said degree shall communicate his intention to do so to the Registrar stating the subject chosen by him for the thesis and support his application by submitting a copy of the contribution published by him towards the advancement of the subject of his study. He shall submit a certificate from two Members of the Faculty that he is a fit and proper person to supplicate for the Degree of Doctor of Letters.

After the thesis is completed, the candidate shall supply five printed or typed copies of his thesis. The thesis shall comply with certain conditions.

If the majority of examiners report that the thesis is satisfactory, the University shall arrange for the *viva voce* examination.

If the *viva voce* examiners are also satisfied, the recommendations shall be placed before the Faculty for necessary action.

Doctor of Philosophy in Commerce (D.Phil. Com.).—The ordinances for D.Phil. in Arts have been adopted.

Doctor of Letters in Economics (D.Litt. Econs.).—The conditions of admission are the same as those for Doctorate in Arts.

Doctor of Philosophy, Science (D.Phil.).—A candidate for the Degree Doctor of Philosophy must be either (1) a Master of Arts or Science of this University or (2) a Master of Arts or Science of any other University recognised by this University.

Every candidate shall pursue as a student of the University a course of research of not less than 20 months' duration.

Note.—A teacher of this University shall be considered to be a student for the purpose of this Ordinance.

He shall pursue his research at Allahabad unless the Vice-Chancellor, on the recommendation of the supervisor, gives him leave of absence for ordinarily not more than one year on the ground that it is in the interest of his research that he should work elsewhere.

No candidate will be permitted to proceed to any research degree unless and until he has paid all dues as a student.

After the thesis is completed the candidate shall supply five printed or typed copies of his thesis which shall comply with certain conditions.

If the majority of examiners report that the thesis is satisfactory, the University shall arrange for the *viva voce* examination.

If the *viva voce* examiners are also satisfied, the recommendations of the thesis and *viva* examiners shall be placed by the Research Degree Committee before the Faculty for necessary action.

Doctor of Science (D.Sc.).—A candidate for the Degree of Doctor of Science must be either (1) (a) Doctor of Philosophy of this University of at least two years' standing or (b) a Master of Arts or a Master of Science of this University of at least seven years' standing, or (2) (c) a Master of Arts or Master of Science of at least seven years' standing of a University recognised by this University who has resided at the University for at least one year, or (d) a Doctor of Philosophy of another University recognised by the Allahabad University, who has resided at the University for at least one year. Candidates under (b) and (c) must satisfy the Faculty that the work already done by them is of sufficient merit to earn exemption from the D.Phil. Degree.

No candidate will be permitted to proceed to any research degree unless and until he has paid all dues as a student.

Every candidate who intends to supplicate for the said degree shall communicate his intention to do so to the Registrar stating the subject chosen by him for the thesis and support his application by submitting a copy of the subject of his study. He shall submit a certificate from two Members of the Faculty that he is a fit and proper person to supplicate for the Degree of Doctor of Science.

After the thesis is completed, the candidate shall supply five printed or typed copies of his thesis. The thesis shall comply with certain conditions.

If the majority of examiners report that the thesis is satisfactory the University shall arrange the *viva voce* examination.

If the *viva voce* examiners are also satisfied, the recommendations shall be placed before the Faculty for necessary action.

Doctor of Laws (LL.D.).—A Master of Laws of the University of Allahabad or any person who has passed the Examination for Honours in Law of that University on or before 1st of November, 1906, is admitted to the LL D. Degree if he has written an essay approved by the Faculty of Law or by a Sub-Committee thereof and has produced a certificate from two Members of the Faculty of Law or two Doctors of Laws to the effect that since obtaining the Degree of Master of Laws or since passing the examination for Honours in Law, he has practised his profession with repute for at least five years or has contributed either by scholastic work or by literary production to the advancement of Law and that in habits and character he is a fit person to receive the Degree.

Conditions of Readmission to the University Examinations

A candidate who has failed once in a Degree Examination is allowed to reappear within five years without putting in the required terms but under certain prescribed conditions. A candidate who has attended a regular course of study for the Previous or Final Examination for the Degree of Bachelor of Laws is allowed to appear at any subsequent examination without attending a further regular course of study provided that he has attended a regular course of study within ten years immediately preceding the examination and provided also that he has attended lectures either in the University School of Law previous to 1923 or in the Law Department of the University. A candidate who has attended a regular course of study for the Final M.A. or Final M.Sc. (Mathematics) Examination is allowed to appear at any subsequent examination without attending a further regular course of study

provided that his application is recommended by the Dean of the Faculty concerned and provided also that he takes the subsequent examination within five years of his having attended a regular course of study. Any candidate who has failed in one subject of the B.A., B.Sc., or B.Com. Examination, but has attained the prescribed standard, is allowed to appear at a subsequent examination in that subject alone. Ex-students are required to pay an annual fee of Rs. 5 per year to appear at subsequent examinations.

Post-graduate Diploma Course in Local Self-Government Administration.—From the commencement of the Academic Session of 1941 the University has started a Post-graduate Diploma Course in Local Self-Government Administration. The duration of the course is one year. The Examination consists of 4 written papers, a *viva voce* and a practical training test.

Teaching of French, German, Russian, Chinese, Photography, Indian Music, Painting, Bengali, Hindi and Sanskrit .

The University provides for the teaching of French, German, and Indian Music and awards a certificate or Proficiency and a Diploma in Indian Music after a course of two years. The classes are held out of University hours. They are open to students and members of the teaching staff but others may also be admitted with the previous permission of the Vice-Chancellor.

Ordinances for a Diploma in Painting have been framed and classes have been started. The fee for the teaching of French, German and Italian is Rs. 4 per month and that of Music Rs. 20 per session. The fee for a Certificate and Diploma is Rs. 10.

The Bengali Association of the University has undertaken to hold classes for the teaching of Bengali, and it is expected that classes will soon be started for the teaching of Marathi. A Certificate of Proficiency in Social Service and Village Uplift Work has been instituted and classes have been started, the annual fee being Rs. 6 and the examination fee Rs. 5. Classes for Laboratory. Workshop Training and for Photography have also been started, the fee is Rs. 3 per month each.

Table of Examination Fees

	Rs.
1. B.A. or B.Sc. (Part I)	.. 20
2. B.A. or B.Sc. (Part II)	.. 30
3. M.A. (Previous) or M.Sc. (Previous)	.. 20
4. M.A. (Final) or M.Sc. (Final)	.. 30
5. B.Com. (Part I)	.. 20
6. B.Com. (Part II)	.. 20

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7. M.Com. (Previous)	..	20
8. M.Com. (Final)	..	30
9. M.Ed.	..	50
10. LL.B. (Previous)	..	30
11. LL.B. (Final)	40
12. LL.M.	..	100
13. D.Phil.	..	150
14. D.Litt. in Arts	..	250
15. D.Litt. in Economics	..	250
16. D.Sc.	..	250
17. LL.D.	..	200
18. Certificate of Proficiency in French or German or Chinese or Russian or Sanskrit	..	10
19. Diploma in Local Self-Government Administration	..	25
20. Diploma in Indian Music (Junior)	..	10
21. Diploma in Indian Music (Senior)	..	15
22. Diploma in Painting	..	10
23. Diploma in Photography	..	10
24. Certificate of Social Service and Village Uplift Work	..	5
25. Certificate Exam. in Photography	..	5
26. Certificate Exam. of Proficiency in Hindi or Bengali	..	10
27. Exam. in an optional subject open to B.A. or B.Com.	..	20
28. Exam. for a Certificate of having passed the B.A. Exam. in English only	..	10

ANDHRA UNIVERSITY

Introduction

The Andhra University, Waltair, was constituted to provide the Andhra Districts of the Madras Presidency with a University of their own. The affiliated and Oriental colleges provide courses of study qualifying students for admission to University examinations including those in Oriental Languages, but excluding those for Honours degrees.

The University College of Arts and Commerce was opened on 1st July, 1931; the Jeypore Vikrama Deo College of Science and Technology on 4th July 1932; the Erskine College of Natural Sciences was opened in June 1941; the University College of Law in July 1945, and the Engineering Degree courses in July 1955.

Consequent on the bombing of Vizagapatam, the Headquarters was temporarily shifted to Guntur in April 1942. In January 1946, the University was shifted back to Waltair. The University College of Law which was temporarily located at Masulipatam was shifted to Waltair in May 1949.

The principal Officers of the University are:—

Chancellor :

His Excellency Shri Chandulal Madhavlal Trivedi,
Governor of Andhra Pradesh.

Pro-Chancellor :

Dr. B. Gopala Reddy, HON. D. LITT. (Andhra)

Vice-Chancellor :

Dr. V. S. Krishna, B.A. (Oxon.), Ph.D. (Vienna).

Registrar :

Sri K. V. Gopalaswamy, M.A. (Oxon.), Barrister-at-Law.

University Orators :

Prof. K. R. Srinivasa Iyengar, M.A , D.LITT.

Sri M. R. Apparao Bahadur, M.A., M.L.A.

Honorary Legal Adviser :

Dr. L. Subba Rau, B.A., B.L., Hon. D.LITT.. (Andhra).

The Vice-Chancellor is a whole-time salaried officer of the University.

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The principal authorities of the University are :—

- (1) The Senate, (2) The Syndicate, (3) The Academic Council,
(4) The Faculties, and (5) The Boards of Studies.

The Senate consists of about 135 members and is the supreme governing body.

The Syndicate consists of 16 members and is the chief executive body of the University.

The Academic Council which consists of about 105 members prescribes courses of study, determines the curricula, has general control of teaching within the University and is responsible for the maintenance of the academic standards thereof.

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1947—The Vice-Chancellor, Andhra University.

II. The Indian Medical Council

1955—(Vacant)

III. The Madras Medical Council

1955—Dr. D. Govinda Reddy, M.D.

IV. Selection Committee for Selecting Candidates for the Post-Graduate Courses in Agriculture, New Delhi.

1938—The Vice-Chancellor, Andhra University.

V. The Sanskrit Entrance Examination Board

(Vacant)

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Mathematics

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<i>Vacant</i>	..	<i>Lecturer in Epigraphy and Archaeology</i>

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Mr. K. Sambamurty, M.Sc.	.. Lecturer
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Mr. G. V. Ramana Murthy, M.A., M.Sc.	.. Lecturer

III. Erskine College of Natural Sciences

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Mr. Ch. Borreswara Rao, M.Sc.	.. Lecturer (on leave)
Mr. B. Balagangadhara Sarma, M.Sc.	.. Lecturer
Mr. U. Aswathanarayana, M.Sc.	.. Lecturer (now in A.E.C. Scheme)
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(Mad.), D.Sc. (Lond.)

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M.D.
2. *Government Training College, Rajahmundry*: Sri K. V. Punnaiah,
M.A. (Hons.) B.Ed.
3. *St. Joseph's Training College for Women, Guntur*: Sister Mary
4. *Agricultural College, Bapatla*:
5. *The College of Engineering, Kakinada*: Prof. V. V. L. Rao, B.E.,
6. *The Medical College, Guntur*: Dr. D. Jagannadha Reddy, M.D.
7. *Andhra Veterinary College, Bapatla*: Dr. P. S. Rajulu.
G.M.V.C.B.V.SC.P.G. (Mupt.)

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2. *Sir C. Ramalinga Reddy College, Eluru*: Mr. D. S. Subrahmanyam,
M.A., B.Ed.
3. *The Gudivada College, Gudivada*: Mr. A. F. Thyagaraju, M.A. (Lond.).
4. *Government College for Women, Guntur*: Miss N. Ammani Amma,
M.A., L.T.

5. *Andhra Christian College, Guntur* : Rao Saheb Dr. T. S. Paulus, M.A., LL.D.
6. *Hindu College, Guntur* : Mr. V. Subba Rao, B.A., (Hons.).
7. *Government Pithapur Rajah's College, Kakinada* : T. U. Chacko, M.Sc.
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10. *Government Arts College, Rajahmundry* : Mr. A. S. Thyagaraju, M.A.
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18. *P. B. N. College, Nidubrole* : Sri C. Subrahmanyam, M.A., L.T.
19. *The Narasapur College, Narasapur* : Mr. Vanuguri Subba Rao, M.Sc., B.ED.
20. *A.M.A. Lingamurti College, Anakapalli* : Mr. S. Parthasarathi Naidu, M.A., L.T.
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2. *The Tenali College, Tenali* : Mr. S. P. Ragland, M.A., L.T.
3. *Ch. S. Devi St. Theresa's College for Women, Eluru* :
Srimathi L. D'Souza, M.A., L.T. Dip. in Edu. (Lond.)

Colleges for Oriental Studies

1. *Narasimha Sanskrit College, Chittigudur (Kistna Dt.)*, Mr. S. T. G. Varadachari, M.A.
2. *Sri Sarada Niketanam, Guntur*: Srimati M. Savithri Devi.
3. *S. V. J. V. Sanskrit College, Kovvur*: Mr. K. V. N. Appa Rao, M.A.
4. *Andhra Women's Sanskrit College, Rajahmundry*: Ubhayabhasha Praveena Srimati B. Kamakshamma.
5. *Kota Lakshmayya Naidu Sanskrit College, Tenali*: Ubhayabhasha Praveena K. Subbaramayya.
6. *Maharajah's Sanskrit College, Vizianagaram*: Mr. K. Sriramamurty Sastry.
7. *Maharaja's Music College, Vizianagaram*: D. Narasinga Rao.
8. *Bhavarananarayanawami Sanskrit College, Ponnur*: Vidwan Ch. Satyanarayana Sastry.
9. *A. S. S. L. S. V. S. Patasala, Aukiripalli, Krishna District*: Mr. P. Venkatesvara Sastry.
10. *Oriental College, Vijayawada*: Mr. V. V. R. Somayaji. V.P., B.P.
11. *Challapalli Rajeswari Sanskrit College, Modekurru, E. Godavari Dist.*
Mr. K. Somasekhara Sastry.

Number of Students in the University in 1955—56

Names of Colleges

I. University Colleges

	Number of Students
University College of Arts and Commerce, Waltair.	437
Jeypore Vikrama Deo College of Science and Technology, Waltair	332
Erskine College of Natural Sciences, Waltair ..	97
University College of Law, Waltair	469

*Number of
Students*

(A) Professional Colleges

1. Agricultural College, Bapatla.	256	
2. College of Engineering, Kakinada.	425	(1)
3. A. C. College, Guntur (B.Ed. Section)	106	
4. St. Joseph's Trg. College for women, Guntur.	(53)	
5. Medical College, Guntur.	175	(33)
6. Govt. Trg. College, Rajahmundry.	105	
7. Andhra Medical College, Visakhapatnam	559	(109)
8. M. R. College, Vizianagaram (B.Ed. Sec.)	76	(10)
9. Govt. Veterinary College, Bapatla	48	
10. Govt. Training College for Women, Rajahmundry.	34	
11. Govt. Training College, Nellore	99	

(B) First Grade Colleges

1. S. K. B. R. College, Amalapuram.	909	(19)
2. W. G. B. College, Bhimavaram.	1723	(38)
3. V. R. S. College, Chirala.	859	(10)
4. Sir C. R. R. College, Eluru.	1388	(53)
5. Gudivada College, Gudivada.	931	(45)
6. Govt. College for Women, Guntur	(345)	
7. A. C. College, Guntur.	1752	(160)
8. Hindu College, Guntur.	1932	
9. P. R. Govt. College, Kakinada.	1643	(151)
10. Kavali College, Kavali.	367	(14)
11. A. J. Kalasala, Masulipatam.	752	(15)
12. Hindu College, Masulipatam.	1689	(92)
13. S. S. N. College, Narasaraopet.	911	(16)
14. V. R. College, Nellore.	1825	(123)

N.B.—The figures within brackets indicate the No. of girl students in the respective Colleges.

	<i>Number of Students</i>	
15. P. B. N. College, Nidubrolu.	329	
16. Govt. Arts College, Rajahmundry.	1413	(106)
17. Govt. Arts College, Srikakulam.	328	(18)
18. S. R. R. & C. V. R. College, Vijayawada	1624	(106)
19. Mrs. A. V. N. College, Visakhapatnam	1317	(158)
20. M. R. College, Vizianagram	1119	(66)

(C) Second Grade Colleges

1. A. M. A. L. College, Anakapali.	287	(13)
2. St. Theresa's College for Women, Eluru.	(64)	
3. The Narsapur College, Narsapur.	374	(21)
4. C. S. R. Sarma College, Ongole	240	(7)
5. The Tenali College, Tenali.	541	(28)
6. Andhra Loyola College, Vijayawada.	691	
	<hr/> 27,289 <hr/>	<hr/> (1908) <hr/>

Colleges in Rayalaseema Area

I. Professional Colleges

1. College of Engineering, Anantapur.	433	
2. Government Training College, Kurnool.	101	(5)

II. 1st and 2nd Grade Colleges

1. Govt. Arts College, Cuddapah.	939	(29)
2. Govt. Arts College, Anantapur.	1610	(88)
3. Besant Theosophical College, Madanapalli.	696	(29)
4. Sri Venkateswara College, Tirupathi.	157	
5. Sri Venkateswara College for Women, Tirupathi.	(111)	
6. Osmania College, Kurnool.	1329	(50)

N.B.—The figures within brackets indicate the number of girl students in the respective Colleges.

*Number of
Students*

III. Oriental Colleges

1. Sri Venkateswara Oriental College, Tirupathi.	175	(32)
2. Islamia Arabic College, Kurnool.	29	
3. Jamia Mohammadiya Arabic College, Rayadurg.	52	
	<hr/> 5632	<hr/> (344)

N.B.—The figures within brackets indicate the number of girl students in the respective Colleges.

Number of Successful Candidates in the University Examination of March-April 1955 and September 1954

S. No.	Name of Examination		No. of Candidates Examined	No. of Candidates Passed
1.	Matriculation	.. March	3,620	1,007
	Do.	September	3,736	914
2.	Intermediate	March-April	11,600	4,083
	Examination in Arts and Science.	September	6,917	1,674
3.	B.A.	.. April	2,179	780
		September	1,210	362
4.	B.Sc.—Part I	.. April	1,028	766
		September	225	162
5.	Do. Part II	.. April	938	542
		September	284	176
6.	B.A. (Hons.)—Part I	.. April	132	97
		September	27	20
7.	Do. Final	.. April	103	77
8.	B.Sc. (Hons.)			
	Part I:—			
	Other than Tech-			
	nology as Main	.. April	86	75
		September	21	19
	Technology as Main.	.. April	28	15
		September	12	7
9.	B.Sc. (Hons.) Part II.	.. April	89	79

S. No.	Name of Examination		No. of Candidates Examined	No. of Candidates Passed
10.	B.Pharm.—Part I ..	April ..	18	18
		September ..	5	4
	B. Pharm.—Part II ..	April ..	7	7
11.	B.Com.—Part I ..	April ..	548	373
		September ..	160	115
12.	Do. Part II ..	April ..	404	225
		September ..	183	93
13.	Do. Part III ..	April ..	790	269
		September ..	456	162
14.	Do. (Hons.)—	April ..	26	19
	Part I ..	September ..	5	5
15.	B.Com. (Hons.)—			
	Final Part II ..	April ..	30	23
16.	M.Sc. ..	April ..	79	69
	M. Pharm. ..	June ..	5	5
17.	M.Co. Preliminary ..	April ..	18	15
18.	Do. Final ..	April ..	18	16
19.	B.Ed. ..	March ..	—	—
20.	Biology (Medical) ..	March ..	—	—
		December ..	1	1
21.	First M.B. & B.S.	March ..	7	—
	(Whole examination)	December ..	2	—
	Part I ..	March ..	48	31
		December ..	150	97
	Part II ..	March ..	136	70
		December ..	71	34
22.	Second M.B. & B.S.	March ..	—	—
	Whole Examination	December ..	—	—
	Part I ..	March ..	63	57
		December ..	46	42
	Part II ..	March ..	93	60
		December ..	77	51
23.	Final M.B. & B.S.	April ..	34	8
	Whole Examination	December ..	24	7
	Part I ..	March ..	28	23
		December ..	36	34
	Part II ..	April ..	72	50
		December ..	57	29

S. No.	Name of Examination			No. of Candidates Examined	No. of Candidates Passed
24.	Diploma Examinations in Medical Subjects.	April December	.. ..	10 4	10 4
25.	M.D. Degree Examination—	December	..	14	1
26.	M.S. Degree Examination—	April	..	21	4
27.	O.T. Admission Test.	September April	1954 1955	31 150	16 95
28.	O.T. Preliminary V.P.				
	Basha Praveena ..	September	1954	49	23
	V.P. ..	April	1955	2	2
	B.P. ..	April	1955	110	50
	O.T. Preliminary and Final ..	September April	1954 1955	4 14	4 11
	O.T. Final—				
	V.P. ..	September	1954	2	2
	B.P. ..	September	1954	41	12
	V.P. ..	April	1955	19	12
	B.P. ..	April	1955	112	59
	Proficiency in Oriental Learning—	September April	1954 1955	— 2	— 2
	Dip. in Music ..	April	1955	27	21
29.	Examinations in B.Sc. (Agriculture)				
	I B.Sc. (Agr.) ..	September- October	1955	19	13
		April	1955	54	43
	Diploma in Geography ..	April	..	3	3
	Diploma in Hindi (Prly.) ..	April	..	1	1
	Final ..	April	..	6	6
	II B.Sc. (Agri.) ..	March-April	1955	69	58
		September- October	1954	19	13
	Final B.Sc. (Agri.) ...	September- October	1954	12	10
		March-April	1955	78	71

<i>S. No.</i>	<i>Name of</i>	<i>Examination</i>	<i>No. of candidates examined</i>	<i>No. of candidates passed</i>
30. Law Examinations				
L.P.	..	September 1954	19	9
		April 1955	76	59
F.L.	..	September 1954	42	21
		April 1955	267	161
B.L.	..	September 1954	18	15
		April 1955	149	123
31. Engineering Examinations				
F.E. Part I	..	September-October 1954	78	46
		March-April 1955	190	68
F.E. Part II	..	September-October 1954	39	26
		March-April 1955	120	71
B.E. Part I (Civil)	..	September-October 1954	16	8
		March-April 1955	48	31
B.E. Part I (Mech.)	..	September-October 1954	12	9
		March-April 1955	21	10
B.E. Part I (Elect.)	..	September-October 1954	6	1
		March-April 1955	16	14
B.E. Part II (Civil)	..	September-October 1954	3	3
		March-April 1955	57	47
B.E. Part II (Mech.)	..	September-October 1954	6	5
		March-April 1955	32	24
B.E. Part II (Elect.)	..	September-October 1954	1	1
		March-April 1955	14	12

Royalaseema Colleges

<i>S. No.</i>	<i>Name of Examination</i>			<i>No. of Candidates Examined</i>	<i>No. of Candidates Passed</i>
1.	Intermediate	..	March 1955	1408	647
2.	B.Sc.	..	March 1955		
		Part I	"	15	3
		Part II	..	50	19
3.	B.A.	..	April 1955	370	109
4.	B.Com.	..	March 1955		
		Part I		8	—
		Part II		38	27
		Part III		38	14
5.	B.Ed.	..	April 1955	100	95
6.	F.E. Part I	..	April 1955	82	28
O.T.					
	Siromani Prely.	..	April 1955	2	1
	Final	..	April 1955	6	6
	E.T. to O.T. Telugu or Tamil	..	April 1955	15	10
	„ Persian	..	April 1955	3	3
	E.T. to Inter Gr.-D. English with Ara- bic, Urdu & Persian	April	1955	3	3
	Vidwan Prely.	..	April 1955	56	48
	Final	..	April 1955	24	21
	Munshi-Kamil	..	April 1955	Nil.	Nil.
	Adili-Fazil Prely.	..	April 1955	1	1
	Afzal-ul-lulame	..	April 1955	1	1
	Tabebi Kamil	..	April 1955	—	—

Benefactions

The total value of benefactions received by the University upto 1953-54
is Rs. 28,02,849-13-5.

X ENDOWMENTS

Abstract Statement of Endowments

<i>Name of Endowment</i>	<i>Name of Donor</i>	<i>Total Value</i>	<i>Annual Income</i>	<i>Purpose</i>
	General		Rs.	
1. Maharajah of Jeypore Endowment.	Sree Sree Sree Maharajah Dr. Vikrama Deo Varma Garu, Hon. D. Litt. (Andhra) Maharajah of Jeypore.	Rs. 1 lakh every year till a capital sum of Rs. 15 lakhs is paid independently of the 1 lakh donation.	1,00,000	To meet the recurring expenditure of the Jeypore Vikrama Deo College of Science and Technology.
2. Maharajah of Bobbili Endowment.	Maharajah Sri Rao Sir Venkata Sweta Chalapathi Ranga Row Bahadur, G C B.E., Maharajah of Bobbili.	Rs. 10,000	5,563	For encouragement of Telugu and Sanskrit Learning.
3. Rajah of Panagal Endowment.	Rajah Ramarayanam Garu, M.L.C., Rajah of Panagal.	Rs. 30,000	500+1,748	For Institution of a Readership in Experimental Psychology.

X ENDOWMENTS—(Contd.)

Abstract Statement of Endowments—(Contd.)

Name of Endowment	Name of Donor	Total Value	Annual Income	Purpose
H. E. H. The Nizam's Endowment.	General—contd. H.E.H. The Nizam's Government.	Rs. 1,00,000	Rs. ..	For purposes of the University Buildings.
His Highness The Maharajah and Her Highness The Maharani of Travancore's Endowment.	His Highness the Maharajah and Her Highness The Maharani Setu Parvathi Bayi of Travancore.	1,00,000	..	For purposes of the University Buildings.
Sir Alladi Krishnaswami Aiyar Endowment.	Sir Alladi Krishnaswami Aiyar, Advocate-General, Madras.	11,000	350	For arranging lectures by distinguished Scholars.

7. Mr. Tikkarapuram Rami Reddy and his Daughters' Endowment.	Mr. T. Rami Reddy of Nellore and his daughters Kumari T. Syamala and Kumari T. Lakshmikantham.	25,000	..	For the construction of T. L. N. Reddy Sabha.
8. The Vice-Chancellor's Fund.	Dr. C. R. Reddy, M.A., (Cantab.) Hon. D. Litt. (Andhra), M.L.C.	20,440 16,385	1,623	For purposes of benefit to the University.
9. Vizag District Board Endowment.	Vizag District Board.	8,400 per year	8,400	For founding the District Board Professorship.
10. East Godavari District Board Endowment.	East Godavari District Board.	4,200 per year	4,200	For instituting the Goutami Professorship in Physics.
11. West Godavari District Board Endowment.	West Godavari District Board.	4,800 per year	4,800	For founding the Gandhian chair.

X ENDOWMENTS—(Contd.)

Abstract Statement of Endowments—(Contd.)

Name of Endowment	Name of Donor	Total Value	Annual Income	Purpose
	General—(Contd.)	Rs.	Rs.	
12 Kistna District Board Research Fellowship and Research Scholarships.	Kistna District Board.	50,000	2,796	For awarding 2 Research Fellowships for D.Sc., and 2 Research Scholarships for M.Sc.
13. Guntur District Board Research Fellowships.	Guntur District Board.	40,000	1,763	For awarding 2 Research Fellowships.
14. Cocanada Municipality Research Fellowships.	Municipal Council, Cocanada.	1,000	1,000	For awarding 1 Research Fellowship for D.Sc. in the Technology Department.
15. Rajah of Munagala's Emperor Krishna Deva Raya's Research Fellowships.	Rajah of Munagala.	20,010	703 8 0	For awarding a Research Fellowship.

16. T. S. Harinarayan Endowment.	Mr. T. S. Harinarayan, L.M.S., Retd., D.M.O., Bezwada.	50,000	1,179	5	0	For awarding three Research Fellowships.
17. Major S R Sarma Scholarship.	Major S. R. Sarma, M. S. M. Rly Office, Park Town, Madras.	Four or five year Endowment of Rs. 1,000 per year.	1,000	0	0	Awarded to a candidate studying Interme- diate to enable him to continue his stu- dies upto B Com. or B Com. (Hons.), with transport as special subject.
18. G. D. Naidu Re- search scholar- ship.	Mr. G. D. Naidu.	11,000	330	0	0	For awarding Research Scholarships.
19. Lord Goschen Me- morial Fund.	The Lord Goschen Memorial Fund Committee.	11,400	667	14	0	For awarding a Scho- larship to M.Sc. or D.Sc. Research can- didates
20. G. L. Narasimham Endowment.	Mr. G. L. Narasimham, L.M.P., Medical Officer, Govt. Hospital, Nandigama.	4,100	120	0	0	For awarding "Sri- mathi Garimella Venkata Lakshmi Seethamma Memo- rial Stipend" to a woman candidate in M.B., B.S.

X ENDOWMENTS—(Contd.)
Abstract Statement of Endowments—(Contd.)

Name of Endowment	Name of Donor	Total Value	Annual Income		Purpose
			Rs.	A. P.	
21. Tirupathi Venkata Kavulu Fellowship Endowment.	General—(Contd.) Satavadhani Chellapalli Venkatastry Sammana Sangham, Vijayawada.	Rs. 12,050	360	0 0	For awarding "Tirupathi Venkata Kavulu Fellowship" for Post-graduate Research in Telugu.
22. H. E. H. The Nizam's Endowment.	H. E. H. The Nizam's Government.	2,00,000	..		For Utsavarangam.
23. Dr. A. V. S. Sarma and Smt. Lalithamba Endowment.	Dr. A. V. S. Sarma, M.B., B.S., D.C.H., (eng.), F.D.S (Lond), Hon. Physician, Government Royapettah Hospital, Madras.	5,000	300	0 0	For holding a lecture-ship once in two years on Paediatrics and Child Health.
24. Dr. A. Lakshmi-pathi Endowment.	Dr. A. Lakshmi-pathy, B.A., M.B. & C.M., Bishagratna, 43, Harris Road, Madras-2.	2,690	280	0 0	For holding a lecture-ship once in three years on Indian medicine.
25. Dr. T. S. Harinarayana Endowment.	Dr. T. S. Harinarayana, L.M.S., Retired. D. M. O., Vijayawada.	50,000	1,500	0 0	For a Fellowship in Medical Subjects.

In addition to these, there are a large number of endowed Scholarships, Medals and Prizes as under :—

The Vizagapatam Electric Supply Corporation Research Fellowship ; Dr. C. R. Reddy Research Fellowship ; The Vizagapatam Municipality Research Scholarships ; The Rajahmundry Municipality Research Scholarship ; Sree Krishna Chandra Deo Scholarship ; Srimati Rekha Devi Scholarship ; Goschen Scholarships ; Andhra Insurance Co. Studentships ; Andhra Scientific Co. Studentships ; V. P. Brahmananda Sastry Studentships ; Anantapur District Board Studentships ; Ellore Municipality Studentships ; The Vizianagaram Municipality Studentships ; Guntur Municipality Studentships ; The Maharajah of Jeypore Studentship ; Rajah of Challapalli Studentship ; Sri Achanta Gopalakrishnayya Memorial Studentship ; Vangala Vanalata Devi Prize (for women) ; V. Somasundara Rao Prize ; The Cook Memorial Prize ; Dewan Bahadur B. V. Sree Hari Rao Nayudu Prize ; B. T. V. T. Rajagopala Rao Prize ; Sreemati Ishwardevi Sahni Prize (for women) ; Sir George Stanley Prize ; Eka (Yeka) Dandiah Pantulu Prize ; S. Krishnaswami Aiyar Medal A. N. P. D. Krishnamacharlu Medal ; Sir R. Venkataratnam Intermediate Medal ; Srimati S. Annapurnamma Medal (for women) ; Prabhala Sundara Ramayya Pantulu's Medal ; K. V. Lakshmana Rao Medal ; Bala Saraswati I. Padmavati Devi Medal (for women) ; Sir R. Venkataratnam, B.A. Medal ; First Pro-Chancellor's Medal ; Mantripragada Nagendra Saiy Medal ; The Kalaprapurna Jayanti Ramayya Pantulu Medal ; General MacDonal Medal ; Ch. Sanyasiraju Medal ; T. Sambaiya Medal ; General Sir Arthur Cotton Medal ; Sripati Medal ; The Metcalfe Medal ; Anderson Medal ; Kameswari Viswanath Medal ; Sir R. Venkataratnam Post-Graduate Medal (for thesis) ; Sreemathi Raghupathi Seshamma (Lady R. Venkataratnam Medal) (for women) ; Dr. S. Rangachari Medal ; Dr. S. Rangachari Surgery Medal ; Jayanti Subhadra Devi Medal (for women) ; Major Ebdon Memorial Medal ; Lakkaraju Sarabhayya Mahalakshma Medal ; Mutyala Venkanna Naidu Medal ; Sri Raja Vatsavayi Venkata Subhadrayamma Jagapathi Prize in Hindu Law ; V. P. Brahmananda Sastri Studentships ; Geda Geratayya Prize ; Geda Subhadramma Prize ; Rev. Canon D. Anantam Post Graduate Studentship ; Tummalapalli Lakshamma Research Fellowship, in Geology ; Tummalapalli Venkataramanayya Pantulu Research Fellowship, Andhra History, Archaeology and Culture ; Tummalapalli Balaramayya Pantulu Research Fellowship in Technology ; Tenali Municipality Studentship ; Sm. Duvvuri Chandra Rao Devi Prize ; The Ramdas Medal ; Sri Vavilla Venkateswara Sastrulu Garu, Telugu (or Sanskrit) Prize ; Maddipati Ganeshwara Rao Studentship ; R. L. Lazarus Prize ; Major S. R. Sarma Scholarship ; S. S. Bhatnagar Prize ; Kala Prapurna Chilakamarthi Lakshminarasimham Prize ; Palukuri Nooka Raju Memorial Prize.

Madabhushi Ranganatha Padmavathi Prize ; Srimathi Pentapati Venkataramanamma Memorial Prize ; Sri Bolla Venkataratnam Prize ; Srimathi Maddipati Venkataramanamma Prizes ; The Andhra Bank Silver Jubilee

Prize; Dr. Cattamanchi Ramalinga Reddy Fellowships; Pushpa Rangaswamy Ayyangar Memorial Prize; Lakkaraju Sarabhaiah Mahalakshamma Medal; Srimathi Kanumilli Venkatanarasamma Prize; Kanumilli Jaggarayudu Prize; K. S. Gupta Memorial Prize; Sri Sangeetha Ratnakara Sangitha Kalanidhi Dwaram Venkataswamy Naidu Prize; Vasireddi Saktiswarudu Garu Prize; Vasireddi Mangamma Garu Prize; Vavilla Venkateswar Sastrulu Garu Telugu or Sanskrit Prize; Dr. N. S. Subbarao Memorial Prize; Veeresalingam Rajyalakshmi Memorial Prize; Shri T. V. Raghaviah Insurance Prize; Vepa Krishnamurthy Medal; Dr. Yellapragada Subbarao Memorial Prize; Immidiseti Lingamurthy Memorial Prize; Puvvada Mrutyunjaya Prize in Commerce; Mahamahopadhyaya Kalaprapurna Sri Tata Subbaraya Sastri Memorial Prize; Sri Nageswara Rao Pantulu Medals (two).

Budget

The University depends on Government grants to meet the routine expenditure.

The following recurring and non-recurring grants were sanctioned by the composite Madras State Government.

Recurring—

- (i) An annual contribution of Rs. 1.50 lakhs.
- 1930 (ii) Recurring grants of Rs. 39,600 towards the cost of employment of Professors and Readers in the Natural Science College.
- 1945 (iii) Recurring grant of Rs. 1,17,400 towards cost of revising the scales of pay of the teaching staff in the University Colleges.
- 1948 (iv) Recurring grant of Rs. 42,400 in respect of Meteorology Department.
- 1951 (v) Recurring grant of Rs. 20,300 for Post-graduate course in Geophysics.
- 1952 (vi) Recurring grant of Rs. 18,000 for Electro-Chemical Technology.
- (vii) Recurring grant of Rs. 1,700 for institution of a Diploma Course in Hindi.

Besides the above grant, the Government of India sanctioned a recurring grant to the maximum of Rs. 88,000 during 1953-54 for the Technology and Pharmacy Departments.

Non-recurring—

- 1930 (i) An endowment grant of 27 lakhs.
- (ii) Non-recurring grant of 7½ lakhs for buildings and Equipment of the University.

- 1940 (iii) Non-recurring grant of Rs. 3,50,000 towards institution of Erskine College of Natural Sciences.
- 1942 (iv) Non-recurring grant of Rs. 3.16 lakhs towards cost of construction of Administration Building.
- 1948 (v) Half grant towards M.Sc. Geophysics subject to a maximum of 1.50 lakhs.

1949-50

	Rs.
(vi) For Meteorology Observatory and Equipment ..	3,00,000
(vii) For Gas tank	30,000
(viii) For Construction of Hostel	3,30,000
(ix) For Library equipment	20,000

1950-51

(x) For Construction of Utsavarangam	2,50,000
(xi) For bringing Laboratories up-to-date	2,00,000

1951-52

(xii) For bringing Laboratories up-to-date	1,50,000
(xiii) For Post-graduate courses in Geology	85,600
(xiv) For Silver Jubilee grant for Applied Physics	6,00,000

1952-53

(xv) For Post-graduate courses in Pure Applied Geology.	80,000
(xvi) For Electro Chemical, Technology as one of the special subjects in Honours Course	70,000
(xvii) For Diploma Course in Hindi	2,500
For equipping, Physics, Chemistry, Botany and Zoology Depts.	50,000
For equipment in Geology and Statistics Depts.	62,000
For founding a Professorship in Sanskrit	3,00,000

The Government of India sanctioned payment of the following grants towards the implementation of the Development Plan of the Jeypore Vikrama Deo College of Science and Technology.

Capital Grant—

						Rs.
(i) For buildings	..	..	..	..	..	60,000
(ii) For equipment	..	..	..	..	..	10,000
1948-49						
(i) For Buildings	..	..	..	..	..	75,000
(ii) „ Equipment	..	..	..	..	..	1,00,000
1949-50	Grant for Technology	..	..	..	..	1,00,000
1950-51—						
Buildings	..	..	..	..	..	50,000
Equipment	..	..	..	..	..	60,000
1952-53—						
Buildings	..	..	..	..	..	1,00,000
Equipment	..	..	..	..	..	90,000
Recurring Grant	..	..	..	..	..	1,08,000
1953-54—						
Buildings	..	..	..	..	..	42,000
Equipment	..	..	..	..	..	62,000
Recurring	..	..	..	..	..	35,000

In 1938 the Government donated to the University and handed over an extent of 34 acres 11 cents of land in the Forest Compound (Government Property) for the use of the University for building purposes and placed at the disposal of the University.

Financial Statement showing the Proportion of Government grants to other services of income

						Rs.
1953-54	Government Grant—Recurring	..	..	..	..	4,24,400
<hr/>						
	Tuition Examination and other fees and other sources of income	..	..	..	..	27,13,243
	Endowments and donations	..	..	..	..	39,140
<hr/>						
	Total income other grant by the State and Central Governments	..	..	..	..	27,52,383
<hr/>						

The proportion is roughly 13 : 2.

Provident Fund

Members of the University Staff, excluding the Vice-Chancellor, drawing a salary of Rs. 20 and above per mensem are members of the University Provident Fund. Persons classified as belonging to Inferior Services are eligible for gratuity at the time of their retirement.

Degrees and Titles

The following are the Degrees instituted in the University :—

Faculty of Arts—

- Bachelor of Arts (B.A.).
- Bachelor of Arts Honours (B.A. Hons.).
- Master of Arts (M.A.).
- Master of Arts in International Relations with branches in Diplomacy and Consular Functions.
- Master of Arts Honours (M.A. Hons.).
- Doctor of Philosophy (Ph.D.).
- Doctor of Letters (D.Litt.).

Faculty of Commerce—

- Bachelor of Commerce (B.Com.).
- Bachelor of Commerce Honours (B.Com. Hons.).
- Master of Commerce (M.Com.).
- Master of Commerce Honours (M.Com. Hons.).
- Doctor of Philosophy (Ph.D.).

Faculty of Agriculture—

- Bachelor of Science in Agriculture (B.Sc., Ag.).
- Master of Science in Agriculture (M.Sc., Ag.).

Faculty of Science—

- Bachelor of Science (B.Sc.).
- Bachelor of Science in Social Studies (B.Sc.) (S.S.).
- Bachelor of Science, Honours (B.Sc., Hons.).
- Bachelor of Pharmacy.
- Master of Science (M.Sc.).
- M.Sc. Degree in Mathematical Physics.
- M.Sc. Degree in Applied Physics.
- M.Sc. Degree in Geophysics.
- M.Sc. Degree in Nuclear Physics.
- M.Sc. Degree in Ore-Dressing.
- Master of Science in Statistics.
- M.Sc. Degree in Electronics.
- Master of Science in Applied Geology.
- Master of Pharmacy.
- Doctor of Science (D.Sc.).

Faculty of Teaching—

Bachelor of Education (B.Ed.).
Master of Education (M.Ed.).

Faculty of Medicine—

Bachelor of Medicine and Surgery (M.B. & B.S.).
Doctor of Science (D.Sc.).
Doctor of Medicine (M.D.).
Master of Surgery (M.S.).
Bachelor of Science.
Master of Science (M.Sc.).
Post-graduate Diploma in Medical Subjects.

Faculty of Law—

Bachelor of Laws (B.L.).
Master of Laws (M.L.).
Doctor of Laws (D.L.).

Faculty of Oriental Learning—

Title in Oriental Learning (Vidya Praveena).
Title in Oriental Learning (Bhasha Praveena).
Certificate of Proficiency in Oriental Learning (P.O.L.).
Master of Oriental Learning (M.O.L.).
Kala Prapurna (K.P.). Honorary Doctorate Degree.

Faculty of Ayurveda—

Bachelor of Ayurveda (B.A.V.).

Faculty of Fine Arts—

Diploma in Music.

The Degrees of D.Litt., LL.D. and D.Sc. may also be conferred as Honorary Degrees.

Courses of Study for the Several Examinations

Admission to courses of study in the University is granted to those who have passed the Matriculation Examination of this University or that of any other University recognised as equivalent thereto.

B. Students who have passed the Intermediate Examination of the Andhra or of any recognised University are eligible for admission to the Honours and other degree courses of the University.

C. Students who have passed the Bachelor's Degree Examination of the Andhra or of any recognised University are eligible for admission to the Bachelor of Education course of the University.

I. Matriculation Examination.

(a) Courses and Papers:—

Part I. (i) English (2 papers).

(ii) A Second Language (1 Paper). (Any one of the following languages: Sanskrit, Arabic, Persian, French, German, Telugu, Kannada, Tamil, Oriya, Bengali, Hindi, Urdu, Marathi, Malayalam).

(iii) Elementary Mathematics (1 paper).

Part II. Any two subjects from either of the Branches (1 Paper in each subject).

Branch-A:—

(1) Mathematics (Advanced Algebra and Geometry), (2) Physics, (3) Chemistry, (4) Botany, (5) Biology, (6) Physiology and Hygiene, (7) Household Arts and Science.

Branch-B:—

(1) Mathematics (Advanced Algebra and Geometry), (2) Indian History, (3) British History, (4) Civics, (5) Geography, (6) Music, (7) Household Arts and Science.

(b) Marks qualifying for a pass in each subject:

(i) 40 per cent in English and 35 per cent in each of the remaining subjects.

(ii) first class 60 per cent and above; second class 50 per cent and above; and third class rest.

III. Intermediate Examination in Arts and Science—(I.A.Sc.).

(a) Duration—two years.

(b) Courses and Papers—

Part I.—English (3 papers).

Part II.—A Second Language (2 papers) (Any one of the following languages,—Sanskrit, Latin, Arabic, Persian, Pali, French, German, Telugu, Kannada, Tamil, Malayalam, Oriya, Hindi, Urdu, Bengali).

Part III.—Optional Subjects.

Any three of the following from prescribed combinations—

- (1) Mathematics.
- (2) Physics.
- (3) Chemistry.
- (4) Botany.

- (5) Zoology including Human Physiology.
- (6) Biology.
- (7) Geography.
- (8) Psychology.
- (9) Geology.
- (10) Logic.
- (11) Indian History.
- (12) British History.
- (13) Civics and Indian Administration.
- (14) An advanced language—Classical—or Modern Indian or English.
- (15) Economic Geography and Economic History.
- (16) Economics and Banking.
- (17) Accountancy and General Commercial Knowledge.
- (18) Agriculture.
- (19) Electrical Engineering.
- (20) Mechanical Engineering.
- (21) Surveying.
- (22) Drawing.
- (23) Music.
- (24) Household Arts and Sciences.

There will be three papers of Mathematics of which the first two papers shall be of 2½ hours duration each and the third of 2 hours duration.

There will be two papers in each of the Arts subjects. Each paper will be of 2½ hours duration except in Music in which the paper will be of 3 hours duration.

There will be two papers in theory each of three hours duration in each of the Science subjects.

(c) Marks qualifying for a pass in—

- (i) each subject under Part I, Part II and Part III 35 per cent.
- (ii) first class 50 per cent and above ; second class 35 per cent and above.

IV. B.A. Degree Examination—

(a) Duration—Two years.

(b) Courses and Papers—

Part I.—English Language and Literature (4 Papers).

Part II.—(A Second Language (2 Papers) (Any one of the following languages—Sanskrit, Latin, Arabic, Persian, Pali, French, German, Telugu, Kannada, Tamil, Malayalam, Oriya, Hindi, Urdu, Bengali.)

Part III.—One of the following Optional Groups.

Group (i) *Mathematics.*

Group (ii) (A)—*Physics Main with Chemistry or Mathematics Subsidiary.*

Group (ii) (B)—*Chemistry Main with Physics Subsidiary.*

Group (ii) (C)—*Botany Main with Zoology or Geology as subsidiary.*

Group (ii) (D)—*Zoology Main with Botany or Geology as subsidiary.*

Group (ii) (E)—*Geology Main with Botany or Zoology is subsidiary.*

Group (iii) *Philosophy.*

Group (iv) *History and Economics (History Main).*

Group (v) *History and Economics (Economics Main).*

Group (vi) *One of the following—*

- (1) Sanskrit and Early Indian History.
- (2) Pali and Early Indian History or Sanskrit.
- (3) Arabic or Persian and Early Muslim History.
- (4) Urdu and Indian History (Muslim Period) or Arabic or Persian.
- (5) Dravidian Language or Oriya and a related subject or Sanskrit.
- (6) Hindi and Mediaeval History of North India or Sanskrit.
- (7) English.

Group (vii) *Music.*

(c) Marks qualifying for a pass in—

- (i) each subject under Part I, Part II and Part III : 25 per cent.
- (ii) first class 60 per cent and above ; second class 50 per cent and above ; third class 35 per cent and above.

V. *B.A. Honours Degree Examination—*

- (a) Duration : Three years (after Intermediate).
- (b) Courses and Papers—

Preliminary—

- (1) English—3 hours.
- (2) Translation—2 hours.

Final—(One of the following Branches) :

Branch I.—Mathematics (9 papers).

Branch II.—Philosophy (8 papers).

Branch III.—History and Politics (8 papers).

Branch III-A.—Economics (8 papers). ..

Branch IV.—English Language and Literature (10 papers).

Branch V.—Telugu Language and Literature (8 papers).

(c) Marks qualifying for a pass in—

(i) each subject under Preliminary and Final 40 per cent.

(ii) first class 60 per cent and above ; second class 50 per cent and above ; third class 40 per cent and above.

VI. B.Com. Degree Examination—

(a) Duration—Two years.

(b) Courses and Papers—

Part I.—English (1 paper).

Part II.—Hindi (1 paper).

Part III.—The following compulsory subjects, viz.—

(1) Commercial Practice and Correspondence.

(2) Commercial Geography.

(3) Book-keeping and Accounts.

(4) Mercantile law.

} Group A

(5) General Economics.

(6) Theory and Practice of Banking.

(7) Business Organization.

} Group B

And any one of the following subjects, viz.

(1) Advanced Accounting and Auditing.

(2) Currency and Exchange.

(3) Transport.

(4) Statistics and their application commerce.

(5) Recent Economic History of England, Germany, Union of Socialist Soviet Republic, United States of America, Japan and India.

(6) Principles and Practice of Co-operation.

(7) Insurance.

The first four of the compulsory subjects come under Group A, and the remaining including the optional subject come under group B. Total number of papers: Nine.

(c) Marks qualifying for a pass in—

Parts I and II.—Not less than 35 per cent of the marks in each Part.

Part III—

- (i) not less than 30 per cent of the marks in each of the subjects under Groups (A) and (B) and 35 per cent of the total number of marks; A candidate not satisfying this rule will nevertheless be declared to have passed in one group provided he obtains not less than 30 per cent in each of the papers of that group and not less than 35 per cent of the total number of marks in that group.
- (ii) first class 60 per cent and above; second class 50 per cent and above; and third class 35 per cent and above. The first class and second class in Part III will be given only to those who pass both Groups A and B at one and the same examination.

VII. *B.Com. (Hons.) Degree Examination—*

(a) Duration—Three years (after Intermediate).

(b) Courses and Papers.

Part I.—Preliminary Examination (at the end of the first year).

- (1) English Composition (1 paper).
- (2) Translation (Hindi) (1 paper).

Part II.—Final Examination. One paper on each of the subjects 1 to 8.

A—Compulsory subjects :—

- (1) Economic Theory—Value, Production, Distribution and Consumption.
- (2) Commercial Geography.
- (3) Accounting.
- (4) Industry and Trade.
- (5) Business Administration.
- (6) Mercantile Law.
- (7) Economic and Business Statistics.
- (8) Money and Banking.

B—Special subject:—Any one of the following subjects : (2 papers).

- (a) Advanced Accountancy and Auditing.
- (b) Currency and Exchange.
- (c) Economics of Transport.
- (d) International Trade.
- (e) Recent Economic History of England, Germany, U.S.A., Japan, U.S.S.R., India and Italy.
- (f) Insurance.
- (g) Principles and practice of co-operation.

(c) Marks qualifying for a pass in—

Part I—

not less than 35 per cent in each of the subjects, (i.e., English and Translation).

Part II—

- (i) not less than 30 per cent in each compulsory subject, 33% in the special subject, and 40 per cent in the aggregate.
- (ii) first class 60 per cent and above ; second class 50 per cent and above and third class 40 per cent and above.

VIII-A. B.Sc. Degree Examination in Agriculture (B.Sc. Ag.).

1. Condition of admission.—Candidates for the degree of Bachelor of Science in Agriculture (B.Sc. Ag.) shall be required :

- (a) to have passed the Intermediate Examinations in Arts and Science of this or other Universities, having offered as optional Chemistry and any two of the following subjects :
 - (i) Mathematics.
 - (ii) Physics.
 - (iii) Biology.
 - (iv) Botany.
 - (v) Natural Science.
 - (vi) Zoology including Human Physiology.
 - (vii) Agriculture.
- or any examination accepted by the Syndicate as equivalent thereto.

2. Courses of study in Agriculture :

Duration—3 years including a course of practical farm training for a period of six months in an Agricultural Research Station or approved private farm in the state.

Subjects of study :

- (i) Agronomy.
- (ii) Agricultural Botany.
- (iii) Agricultural Chemistry.
- (iv) Agricultural Zoology.
- (v) Agricultural Engineering.
- (vi) Animal Hygiene.
- (vii) Horticulture

3. The first examination shall be held at the end of the first year of the course of study and shall be in the following subjects :—

- (i) Agronomy.
- (ii) Botany.
- (iii) Chemistry.
- (iv) Zoology.
- (v) Agricultural Engineering (Civil).

4. The second examination shall be held at the end of the second year of the course of study and shall be in the following subjects :—

- (i) Agricultural—Plant Husbandry.
- (ii) Agricultural Engineering (Mechanical).
- (iii) Agricultural Entomology.
- (iv) Agricultural Botany.
- (v) Agricultural Chemistry.
- (vi) Animal Hygiene.

5. Subjects for the Final examination.—The final examination shall be held at the end of third year of the course of study and shall be in the following subjects :—

- (i) Agronomy I—Agricultural Economics including Co-operation and propaganda.
- (ii) Agronomy II—Animal Husbandry and Farm Management.
- (iii) Agricultural Botany I—Plant Breeding and Genetics.
- (iv) Agricultural Botany II—Plant Pathology and Cryptogams.
- (v) Courses and Papers.
- (vi) Horticulture.

6. (i) A candidate shall be declared to have passed the first, second and final examinations, if he obtains not less than 40 per cent of the marks in each of the subjects prescribed for each of the above examinations.

(ii) A candidate who obtains 40 per cent in any subject in the first, second and final examinations, and 33% each in theory and practical in that subjects shall be declared to have passed in that subject.

7. First class 60 per cent and above of the total marks. Second class 50 per cent and above.

VIII-B. Bachelor of Veterinary Science and Animal Husbandry
(B.V. Sc. & A.H.).

Conditions of admission.—Candidates for admission shall be required :

- (i) to have passed the Intermediate Examination of this University or an examination of any other University recognised as equivalent thereto, having offered Chemistry and Biology as two of the three subjects in Part III or Chemistry, Botany and Zoology as the three subjects in Part III
- (ii) to have completed the age of 17 years on or before the date of admission.

Duration of the course—Four academic years each consisting of three terms ordinarily consecutive subjects of study :

I. B.V. Sc. & A.H. Preliminary Examination shall be held in the following subjects :

- (i) Anatomy including Osteology and Arthorology, Histology and Embryology.
- (ii) Physiology including Bio-Chemistry.
- (iii) Animal Husbandry, Agronomy including Soils and Crops, Animal Management and Shoeing.

II. B.V. Sc. & A.H. Second Examination shall be held in the following subjects :

- (i) Anatomy including Histology and Embryology.
- (ii) Physiology including Experimental Physiology.
- (iii) Animal Husbandry (Hygiene).
- (iv) Pathology and Bacteriology including Immunology.

III. B.V. Sc. & A.H. Third Examination shall be held in the following subjects :

- (i) Parasitology including Helminthology, Protozoology and Entomology.
- (ii) Clinical Medicine including Therapeutics and Toxicology.
- (iii) Pharmacology including Materia Medica.
- (iv) Animal Husbandry including Nutrition and Dairy Science.

IV. B.V. Sc. & A.H. Final Examination shall be held in the following subjects :

- (i) Surgery including Soundness, Obstetrics and Veterinary Jurisprudence.
- (ii) Preventive Medicine.
- (iii) Meat Inspection.
- (iv) Animal Husbandry Part IV—Animal Genetics and Breeding.
- (v) Statistics, Co-operation and Farm Economics including Marketing.

Candidates at the end of the Ist year, IInd year and IIIrd year shall be required to undergo a course of practical training in a farm for six weeks during each of the vacations.

Candidates shall be declared to have passed in each of the above examinations if they have obtained in each of the subjects not less than one half of the marks in the written and oral parts taken together and not less than one half of the marks in the Practical examination. All other candidates shall be deemed to have failed in the examination.

Candidates who pass the whole examination at their first appearance shall be arranged in two classes the first consisting of those who obtains not less than seventy per cent of the aggregate marks and the second consisting of all the others separately in each of the Preliminary, Second, Third and Final Examinations.

IX. B.Sc. Degree Examination—(Faculty of Science.)

- (a) Duration: Two years.
- (b) Courses and Papers.

Part I --English.

Part II.--Mathematics Main (6 papers).

Physics Main (6 papers).

Chemistry Main (6 papers).

Botany, Zoology or Geology Main (6 papers).

Physiology Main (5 papers).

Mathematics Subsidiary.

Physics Subsidiary.

Applied Physics Subsidiary.

Chemistry Subsidiary.

Botany Subsidiary.

Zoology Subsidiary.

Geology Subsidiary.

Physiology Subsidiary.

(c) Marks qualifying for a pass in.—

(i) each subject under Parts I and II, 35 per cent.

(ii) first class 60 per cent and above ; second class 50 per cent and above ; and third class 35 per cent and above.

X. B.Sc. Honours Degree Examination—

(A) *With Mathematics and Mathematical Physics.*

(B) *With Physics or Chemistry as Main Subject.*

(a) Duration : Three years.

(b) Courses and Papers.

Part I.—(1) General English.

(2) Translation.

Part II (*Mathematics and Mathematical Physics* (7 papers). No subsidiary.

Physics Main (10 papers).

Chemistry Main (9 papers).

Physics Subsidiary to Chemistry Main.

Chemistry Subsidiary to Physics Main.

Mathematics Subsidiary for Physics Main.

Mathematics Subsidiary for Chemistry Main.

As in the case of Main Subject, classes are also assigned to the Subsidiary Subjects in accordance with the marks secured as shown below.

(C) *With Chemical Technology as Main Subject—*

(a) Duration : Three years.

(b) Courses and Papers.

The Courses shall comprise institution in—

Part I.—(a) Mathematics, (b) Physics, (c) Chemistry, and (d) General Engineering including Machine Drawing and Workshop Practice.

Part II.—Chemical Technology, Chemical Engineering and any one of the following special subjects for the study of which provision may be made by the University :—

(i) Sugar.

(ii) Oils and Fats (including essential oils).

(iii) Ceramics and

(iv) Electro-Chemical Technology.

(D) *With Botany or Zoology or Geology as Main Subject—*

(a) Duration: Three years.

(b) Courses and Papers—

Part I.—(a) English and (b) a Simple Course in French or German.

Part II.—Any one of the following branches of knowledge.

- (i) Botany as the Main subject with Chemistry or Zoology or Geology as Subsidiary subject.
- (ii) Zoology as the Main subject with Chemistry or Botany or Geology as Subsidiary subject.
- (iii) Geology as the Main subject with Physics or Chemistry or Geology or Botany as Subsidiary subject.
- (c) Marks qualifying for a pass—

A candidate shall be declared to have passed the Part I examination if he obtains not less than 40 per cent in each of the papers in English and Translation. All other candidates shall be deemed to have failed in the Examination. Successful candidates obtaining not less than 60 per cent shall be declared to have passed with distinction in that subject.

A candidate shall be declared to have passed the B.Sc. (Honours) Degree examination if he has obtained not less than 40 per cent of the total marks in the Main subject and 40 per cent of the total marks in the Subsidiary subject under Part II, provided however, no candidate shall be deemed to have passed, in the Main subject under Part II unless he gets not less than 33 per cent of the total marks in each of the two divisions of the Main subject, *viz.*, (i) Theory of the Main subject, (ii) Practicals of the Main subject, including the practical records submitted (and *viva voce* in the case of Natural Science subjects).

(d) Classification of successful candidates.

First class not less than 60 per cent of the total marks and 45 per cent in each Part—Written and Practical; second class not less than 50 per cent of the total marks and 40 per cent in each Part—Written and Practical; third class not less than 40 per cent of the total marks and 35 per cent in each Part—Written and Practical.

XI. *B. Pharm. Degree Examination.**Regulations*

1. A candidate for the B.Pharm. Degree shall be required.

- (i) to have passed the I.Sc. examination of this University (with Physics and Chemistry as two optional subjects and either Mathematics, Biology, Botany or Zoology as the third optional subject) or any other examination recognized by the Academic Council as equivalent thereto.

- (ii) to have undergone subsequently a course of study in the University College as prescribed hereunder extending over a period of 3 academic years each consisting of 3 consecutive terms.
- (iii) to have passed the examination for the degree hereinafter prescribed, and
- (iv) to have undergone at least one month's practical training in a hospital pharmacy, drug-store or pharmaceutical works, either during the course of immediately after its completion and before the degree is awarded.

XII. *Post-Graduate and Research Degrees*

1. *Master of Arts (M.A.)*

1. A candidate who has qualified for the B.A. (Honours) Degree of the University by passing the prescribed Examination under the Regulations may without further examination but upon payment of the prescribed fee, proceed to take the M.A. Degree of the University at any Convocation subsequent to his taking the B.A. (Honours) Degree.

2. *Master of Arts in International Relations with branches in Diplomacy and Consular Functions* *Regulations*

1. Candidates for the Degree of Master of Arts in International Relations, M.A. (Inter. Rel.) shall be required—

- (i) to have passed (a) the B.A. (Hons.) Degree Examination with Branch II—History and Politics or Branch III-A Economics or (b) the B.L. Degree Examination after undergoing the three years' course or (c) the B.L. Degree Examination after undergoing the two years' course and having taken the B.A. Degree Examination with Group IV—History Main or Group V—Economics Main, of this University.

Or

the B.A. (Hons.) or the B.A. and B.L. Degree Examinations with the above or identical optional subjects of any other statutory Indian University recognised by the Academic Council as equivalent thereto;

- (ii) to have undergone subsequently a further course of study in the University Colleges as prescribed hereunder extending over a period of two years, each consisting of three consecutive terms and
- (iii) to have passed the Examination for the Degree hereinafter prescribed.

3. *Master of Arts (Hons.) M.A. (Hons.)*

1. The Degree of Master of Arts (Honours) is conferred on persons who have passed the B.A. (Hons.) or B.Sc. (Hons.) in Mathematics Degree Examination of this University in first or second class or an examination of any other University recognised as equivalent to the above.

2. All candidates for the Degree of M.A. (Hons.) are required to pursue in the University for at least two academic years an approved full-time course of research under the direction of the head of the department concerned or of a member of the University staff appointed by the Vice-Chancellor on his recommendation.

4. *Master of Commerce (M.Com.)*

1. A candidate for the Degree of Master of Commerce shall be required—

(a) to have passed the B.Com. (Hons.) or B.Com. (Pass) Degree Examination of this University or an examination of any other University recognised as equivalent thereto.

(b) to have undergone subsequently a further course of study in the University College of Commerce, extending over a period of one academic year consisting of three consecutive terms in the case of Honours graduates and two academic years each consisting of three consecutive terms in the case of Pass graduates.

2. (a) Degree of Master of Commerce (Honours) *M.Com. (Hons.) (By Research)*.

1. The Degree of Master of Commerce (Honours) is conferred on persons who have passed the M.Com. Degree Examination of this University in First or Second Class or an examination of any other University recognised as equivalent thereto.

2. All candidates for the Degree of M.Com. (Hons.) are required to pursue in the University for a period of one academic year an approved full time course of research under the direction of the Head of the Department concerned or of a member of the University staff appointed by the Vice-Chancellor on his recommendation.

5. *Degree of Doctor of Philosophy (Ph.D.)*

1. The Degree of Doctor of Philosophy (Ph. D.) is conferred on persons who have passed the B.A. (Hons.) or B.Sc. (Hons.) in Mathematics Degree Examination or M.A. (Hons.) Degree Examination or M.Com. Degree Examination or M.Com. (Hons.) Degree Examination

of the University or an examination of any other University recognised as equivalent to the above, and who have satisfied the conditions laid down in the following paragraph.

2. All candidates for the Degree of Ph.D. are required to pursue in the University for at least three years—the period shall be two years in the case of those who have already taken the M.A. (Hons.) or M.Com. (Hons.) Degree and shall be four academic years in the case of third class Honours graduates—an approved full time course of research under the direction of the Head of the Department concerned or of a member of the University staff appointed by the Vice-Chancellor on his recommendation.

6. *Degree of Master of Science (M.Sc.)*
(in Physical and Natural Science)

1. The Degree of Master of Science (M.Sc.) in Physics Chemistry, Botany, Zoology or Geology is conferred on persons who have passed the B.Sc. (Hons.) Degree Examination or B.Sc. Pass Degree Examination of the University or an examination of any other University, recognised as equivalent to the above.

2. All candidates for the Degree of M.Sc. are required to pursue in the University for at least one academic year, the period being two academic years in the case of a Third Class Honours or First and Second Class B.Sc. Pass Graduates, an approved full-time course of advanced study and research under the direction of the Head of the Department concerned or of a member of the University staff appointed by the Vice-Chancellor on his recommendation.

6-A. *M.Sc. Degree Examination in Electronics*

1. *Admission qualification*—B.Sc. (Pass) or B.Sc. (Hons.) Degree with Physics.

2. *Duration*—Two years for Pass and one year for Honours Graduates.

3. *Subjects*—

(1) Thermions and Thermionic Tubes.

(2) Wireless.

(3) Radio Wave Propagation and Electronic Instruments.

6-B. *M.Sc. Degree Examination in Nuclear Physics*

1. *Admission qualification*.—B.Sc. (Hons.) Degree in Physics or Mathematics.

2. *Duration*—One academic year consisting of three consecutive terms.

3. A candidate shall be required :

- (i) to have undergone a course of study in the subjects, viz.
 - (1) Quantum Mechanics, (2) Nuclear Physics and (3) Nuclear Instruments.
- (ii) to have passed the prescribed examination in theory and practical in each of the above subjects.

7. Degree of Master of Science in Mathematical Physics

1. A candidate for the Degree of Master of Science in Mathematical Physics shall be required.

- (a) to have passed the B.Sc. (Hons.) Degree Examination with Mathematics or with Physics as the Main subject or B.A. (Hons.) Degree Examination in Mathematics of this University or an examination of any other University recognised as equivalent thereto ;
- (b) to have undergone subsequently a further course of study in the University College, extending over a period of one academic year consisting of three consecutive terms ; and
- (c) to have passed the prescribed examinations

8. M.Sc. Degree in Statistics

1. A candidate for the degree of Master of Science (Statistics) shall be required—

- (i) to have passed the B.A. (Hons.) Degree Examination in Mathematics or Economics with Mathematical Economics and Statistical Computations in Part II (Economics Honours) of this University or an examination of any other statutory University recognized as equivalent to either of these ; and
- (ii) to have completed a further course of study in the University Colleges for a period of two academic years consisting of three consecutive terms each ; and
- (iii) to have passed the prescribed examination.

8-A. Degree of Master of Science in Applied Physics

I. A candidate for the Degree of Master of Science in Applied Physics shall be required :—

- (a) to have passed the B.Sc. Pass or B.Sc. (Hons.) Degree examination of this University with Physics as the Main subject or an examination of any other University recognised as equivalent thereto.
- (b) to have undergone subsequently a further course of study in the University College, extending over a period of two

academic years consisting of three consecutive terms in the case of Honours Graduates and three academic years in the case of Pass Graduates.

9. *M.Sc. Degree Examination in Geophysics*

A candidate for the M.Sc. Degree Examination in Geophysics may offer either Branch I—Applied Geophysics or Branch II—Meteorology.

I. A candidate for the Degree of Master of Science in Geophysics—Branch I Applied Geophysics shall be required—

- (a) to have passed the B.Sc. Pass Degree Examination with Physics or Geology as the main subject or the B.Sc. (Hons.) Degree Examination with physics or mathematics or geology as the main subject of this University or an examination recognised by the Academic Council as equivalent thereto,
- (b) to have undergone subsequently a further course of study in the University College extending over a period of two academic years each consisting of three consecutive terms, in the case of Honours Graduates and three academic years in the case of Pass Graduates, and
- (c) to have passed the prescribed examination.

II. A candidate for the degree of Master of Science in Geophysics—Branch II—meteorology shall be required—

- (a) to have passed the B.Sc. Pass degree Examination with Physics as the Main subject or B.Sc. Honours Degree Examination with Physics or Mathematics as the Main subject of this University or an Examination of any other University recognised by the Academic Council as equivalent thereto,
- (b) to have undergone subsequently a further course of study in the University College, extending over a period of two academic years each consisting of three consecutive terms in the case of Honours Graduates and three academic years in the case of Pass Graduates, and
- (c) to have passed the prescribed examinations.

10. *Degree of Master of Science in Chemical Technology* (*M.Sc. Chem. Tech.*)

1. A candidate for the Degree of Master of Science in Chemical Technology shall be required—

- (a) to have passed the B.Sc. (Hons.) examination in the University with Chemical Technology as the Main subject. Provided that candidates selecting Electro-Chemical Technology as special subject should have passed the B.Sc. (Hons.) Degree Examination in Chemical Technology with the same special subject *viz.*, Electro-Chemical Technology;
- (b) to have undergone subsequently the prescribed course of study in the University for a period of one academic year;
- (c) to have passed the prescribed examination.

2. Each student for the Degree of Master of Science in Chemical Technology shall be required to undergo practical training for at least two months after the University Examinations in a factory producing Electro-Chemical Products in the case of students who have taken Electro-Chemical Technology as special subject and in the case of other students in an approved chemical factory and under the direction of a competent person and shall submit through his Director at the factory report of the work done to the head of the department.

3 Courses: (i) Scientific German Translation, (ii) General economics and factory management, (iii) Sugar technology, (iv) Chemical Engineering, (v) Oils and Fats, (vi) Ceramics, (vii) Electro-Chemical Technology.

11. *M.Sc. Degree Examination in Ore-Dressing*

1. *Admission qualification*—B.Sc. Hons. Degree in Geology or Chemical Technology.

2. *Duration*—One academic year plus practical training for at least two months in an approved factory or mine.

3. The course in Ore-dressing includes a preliminary course in (a) General and Chemical Engineering for Geology graduates, and (b) Geology for Technology graduates.

12. *M.Pharm. Degree Examination*

A candidate for the M.Pharm. Degree Examination may offer either Branch I—Food, Drugs and Water or Branch II—Manufacture of Pharmaceuticals and Fine Chemicals.

A. (1) A candidate for the degree of Master of Pharmacy—Branch I—Foods, Drugs and Water—shall be required.

- (a) to have passed the B.Pharm. Degree Examination of this University or an examination of any other University recognised by the Academic Council as equivalent thereto;
- (b) to have undergone subsequently a further course of study in the University College extending over a period of one academic year, consisting of three consecutive terms;
- (c) to have passed the prescribed examinations.

B. (1) A candidate for the degree of Master of Pharmacy Branch II—Manufacture of Pharmaceuticals and Fine Chemicals—shall be required—

- (a) to have passed the B.Pharm. Degree Examination of this University or an examination of any other University recognized by the Academic Council as equivalent thereto;
- (b) to have undergone subsequently a further course of study in the University College for a period of one academic year consisting of three consecutive terms;
- (c) to have passed the prescribed examinations; and
- (d) to have undergone practical training in an approved pharmaceutical works for a period of two months immediately after the close of the University Examinations.

13. *M.Sc. Degree Examination in Applied Geology*

1. Candidates for the degree of M.Sc. in Applied Geology shall be required

- (a) to have passed B.Sc. degree examination in first or second class, or B.Sc. (Hons.) degree examination of this University, with Geology as the Main subject, or an examination of any other University recognized by the Academic Council as equivalent thereto;
- (b) to have undergone subsequently a further course of study in Applied Geology extending over a period of two academic years; each consisting of three terms ordinarily consecutive;
- (c) candidates holding B.Sc. degree to spend a minimum of 4 weeks in geological mapping or in mines during Michaelmas and Christmas vacations during first year;
- (d) to spend at least six weeks in the intervening summer vacation between first and second year courses on field work or in mines or quarries approved by the syndicate;
- (e) to have passed the examination for the M.Sc. degree herein-after prescribed.

14. *Degree of Doctor of Science (D.Sc.)*

1. The Degree of Doctor of Science (D.Sc.) is conferred on persons who have passed the Master of Science Degree examination of the University or an examination of any other University, recognised as equivalent to the above and who have satisfied the conditions laid down in the following paragraph.

2. All candidates for the Degree of D.Sc. are required to pursue in the University for at least three academic years an approved full-time course of research under the direction of the head of the department concerned or of a member of the University staff appointed by the Vice-Chancellor on his recommendation :

Provided that, after completion of the first year of the course a candidate may be permitted to devote such periods as may be deemed advisable by the Vice-Chancellor to full-time research in other approved Universities or institutions, or at a place and under conditions approved by the University, while remaining under the direction of the University or of persons nominated by the University.

15. *Degree of Master of Science in Agriculture [M.Sc. (Ag.)]*

1. The Degree of Master of Science in Agriculture [M.Sc. (Ag.)] is conferred on persons who have passed the B.Sc. (Ag.) Degree examination of this University in at least second class or an examination of any other University recognised as equivalent thereto, and who have satisfied the conditions laid down in the following paragraphs.

2. All candidates for the Degree of M.Sc. are required to pursue for not less than two academic years in the Agricultural College, Bapatla or in any other recognised Institution an approved full-time course of advanced study and research under the direction of the teacher concerned of that college or a member of the staff of the institution concerned approved by the Vice-Chancellor on the recommendation of the Principal or the head of the Institution concerned.

B.Sc., M.Sc. and Post-Graduate Diplomas in Medical Subjects

16. *B.Sc. Degree in Non-Clinical Subjects (Medical)*

1. The University shall grant a B.Sc. Degree in Non-Clinical subjects (Medical) to candidates who have satisfied the University Regulations relating to the Degree.

2. Candidates for the Degree shall be required to have passed the M.B.B.S. or higher medical degree examination of this University or a similar examination of another approved University. Graduates in Veterinary and Pure Sciences are also eligible, provided they have met the other conditions prescribed for the Diploma.

The course of study shall extend over one year for graduates in Medicine and Veterinary Science and two years for others.

The following subjects may be taken for the B.Sc. degree.

Anatomy.

Bacteriology.

Biochemistry.

Physiology.

Natural Science graduates with chemistry as one of the subsidiary subjects are eligible for admission to Anatomy and Physiology courses.

Physics, Chemistry or Natural Science graduates with Chemistry as one of the subsidiary subjects are eligible for admission to Bacteriology course.

Graduates in Chemistry, Pharmacy or Geology are eligible for admission to Bio-Chemistry course.

Candidates who pass B.Sc. shall be eligible to submit a thesis for the M.Sc. Degree at the end of one year after doing research in a Laboratory of Medical or Veterinary Colleges or any Biochemical Laboratory of any University approved by the Andhra University.

17. Degree of Master of Science

A graduate holding the degree of Bachelor of Medicine and Bachelor of Surgery of this University or the Degree of Bachelor of Science in Non-clinical subjects of this University, or of any other University recognised as equivalent thereto, may present himself for the degree of Master of Science (M.Sc.) in any one of the following subjects:—

(a) Anatomy.

(b) Physiology.

(c) Bio-Chemistry (Medical).

(d) Pathology.

(e) Bacteriology.

(f) Pharmacology.

(g) Forensic Medicine.

two years after having qualified for the M.B.B.S. Degree or one year after having qualified for the B.Sc. Degree in Non-clinical subjects and not earlier than one year from the date of registration or approval by the Syndicate for the purpose of pursuing research in accordance with the conditions laid down in regulation 2.

18. *Diploma in Venereology.* 19. *Diploma in Dermatology.*

20. *Diploma in Anaesthesia.* 21. *Diploma in Gynaecology*

and Obstetrics. 22. *Diploma in Ophthalmology.*

23. *Diploma in Laryngology and Otology*

1. *Conditions of admission.*—Candidates for any of the above Diploma shall be required to have passed the M.B. B.S. Degree examination of this University, or an examination recognised by the Academic Council as equivalent thereto.

“No candidate shall be eligible to appear for the Diploma examination—

(a) Unless he has, subsequent to passing the M.B. B.S. Degree examination or its recognised equivalent, held an appointment as a House-Surgeon for at least one year in a General Hospital, or served as a member of the staff of the Andhra Medical College for at least one year, or produced satisfactory evidence of having been in general practice for at least two years; and

(b) Unless he has subsequent to fulfilling the conditions mentioned in (a) above, undergone a course of study for the Diploma extending over a period of one year.”

24. *Degree of Doctor of Science (D.Sc.)*

1. The Degree of Doctor of Science (D.Sc.) is conferred on persons who have passed the Master of Science Degree Examination or the M.B. B.S. Degree examination of the University or an examination of any other University recognised by the Academic Council as equivalent to the above and who have satisfied the conditions laid down in the following paragraphs.

2. Candidates for the Degree of D.Sc. are required to pursue in the University for at least three academic years an approved full-time course of research under the direction of the head of the department concerned or of a member of the University staff appointed by the Vice-Chancellor on the recommendation of the head of the Department.

Provided that, after completion of the first year of the course a candidate may be permitted to devote such periods as may be deemed advisable by the Vice-Chancellor to full-time research in other approved Universities or institutions, or at a place and under conditions approved by the Vice-Chancellor while remaining under the direction of the University or of persons nominated by the Vice-Chancellor.

Provided also that the Malaria Institute of India, Delhi and the Upgraded Department of Anatomy, Stanley Medical College, Madras and Central Research Institute, Kasauli may be recognised as a Post-graduate Research Centre for purposes of doing research with a view to submit

theses for the award of the D.Sc. Degree of the University subject to the condition that they produce satisfactory evidence of having carried out not less than three years of continuous experimental work under approved direction and that they satisfy other conditions and regulations regarding registration and award of the D.Sc. Degree.

XIII. B.Ed. Degree Examination

(a) Duration: One year.

(b) Courses and papers—

Part I (Written Examination)

<i>Days</i>		<i>Hours</i>	<i>Subjects</i>	<i>Marks</i>
First day	..	8 to 11	1. Theory and Practice of Education—I	100
Second day	..	Do.	2. Theory and Practice of Education—II	100
Third day	..	Do.	3. The Principles and Practice of Basic Education (including Pre-Basic) .. .	100
Total number of marks for Part I				300

Part II (Written Examination)

<i>Days</i>		<i>Hours</i>	<i>Subjects</i>	<i>Marks</i>
Fourth day	..	8 to 11	4. Methods of Teaching—General	100
Fifth day	..	Do. 1½ hour for each subject.	5. (i) Methods of Teaching—1—Special A	50 marks for each subject.
Sixth day	..	8 to 10	(ii) Methods of Teaching—Special B	50

There will be one paper for each of the subjects under 'Special B'.

Total number of marks for Part II, 200 marks or 250 marks according as the number of special subjects chosen is 2 or 3.

Part III (Practical Test)

	<i>At College</i>	<i>At Examination</i>
	<i>Marks</i>	<div><i>Time</i><i>Marks</i></div>
		(100 marks for each subject)
6. (i) Teaching practice Each		Half-an
Special subject ..	40	hour. 60
(ii) Practical working and maintenance of Audiovisual aids; preparation and maintenance of other apparatus	40	
(iii) Measurement and Diagnosis (Examining Testing; Recording, Evaluating ..	40	
(iv) Practical aspects of Health, Education and Citizenship Training ..	40	
Physical Education ..	40	
(v) Arts and crafts or Home Science for women (including Basic crafts) ..	40*	

(c) Marks qualifying for a pass in— ..

(i) not less than 35 per cent of the aggregate marks in papers (i), (ii) and (iii) comprising Part I.

(2) Not less than 35 per cent of the marks in 'Methods of Teaching—General' and not less than 35 per cent of the marks (in the aggregate, if necessary) in the papers on 'Methods of Teaching—Special', and not less than 40 per cent of the marks in the aggregate in the papers on 'Methods of Teaching—General' and 'Methods of Teaching—Special'.

(3) Not less than 40 per cent of the marks in 'Teaching practice' for the work done at College and for the lessons given at the Practical Examination in the two special subjects taken together and not less than 40 per cent of the aggregate marks in Part III."

* Only when the number of special subjects chosen is two. The total number of marks for Part III is 400 or 460 according as the number of special subjects chosen is two or three.

- (ii) first class 60 per cent and above; second class 50 per cent and above; and third class rest.

XIV. *M.Ed. Degree Examinations*

1. The Degree of Master of Education may be conferred upon:—

- (1) persons who have passed the B.Ed. Degree Examination of this University and who have not less than two years' teaching experience.
- (2) No candidate shall be eligible for the M.Ed. Degree unless he has completed the prescribed course of study in the University or in an affiliated college and has passed the qualifying examination and has satisfied the examiners in a dissertation on an approved subject.

2. The course of study shall extend over a period of one academic year for full-time students and over a period of two academic years for part-time students to teachers in recognised schools or colleges attending the college for not less than two hours per day for purposes of lectures tutorials and library work.

XV. *Medical Examination*

* (i) (a) *M.B.B.S. Degree Examination* (Old Regulations).

(a) Duration: Five years plus six months of post-examination training.

(b) Courses and Papers—

(1) *First M.B.B.S Examination*—

Part I—Organic Chemistry.

Part II—(1) Anatomy—

(2) Physiology—

(2) *Second M.B.B.S. Examination*—

(1) Pharmacology—

(2) Hygiene—

(3) Pathology—

(3) *Final M.B.B.S. Examination*—

(1) Medicine—

(2) Surgery—

(3) Obstetrics and Gynaecology—

(4) Ophthalmology—

(5) Forensic Medicine—

* Last batch of candidates under the Old Regulations were admitted in July 1953.

(4) *Post-examination training for six months after passing that Final M.B.B.S. and before conferment of the Degree.*

(i) (b) *M.B.B.S. Degree Examination (New Regulations)—*

(In force from the academic year, 1954-55)

(a) *Duration—Four and half years plus one year post-examination training.*

(b) *Courses and Papers.*

1. *First M.B.B.S. Examination—*

Part I—Organic and Physical Chemistry.

Part II—(1) Anatomy.

(2) Physiology.

2. *Second M.B.B.S. Examination—*

Part I—Pharmacology.

Part II—(1) Forensic Medicine and Toxicology.

(2) Pathology and Bacteriology.

3. *Final M.B.B.S. Examination—*

Part I—(a) Ophthalmology.

(b) Hygiene and Preventive and Social Medicine.

Part II—(a) Medicine.

(b) Surgery.

(c) Obstetrics and Gynaecology.

4. *Post-examination training for one year after passing the Final M.B.B.S. Examination.*

(ii) *Degree of Doctor of Medicine*

1. (a) No candidate shall be admitted to the examination for the Degree of Doctor of Medicine unless he produces a certificate showing that—

(1) having passed the M.B. & B.S. Degree Examination of this University, he has been engaged for five years continuously in the practice of the medical profession, provided he works for six months in a recognised teaching institution before taking the examination or

(2) after qualifying for the M.B. & B.S. Degree he has passed three years out of which in the case of clinical subjects he has spent two and half years in hospital practice and in the case of non-clinical subjects one year as a house-surgeon and one and half years in the laboratory practice, or

- (3) having passed the M.B. & B.S. Degree Examination in the first class he has passed one and half years in hospital practice.
- (4) Every candidate for the M.D. Degree Examination in Medicine or obstetrics shall attend a course of post-graduate lectures extending over a period of nearly six months preceding the Examination.

(iii) *Degree of Bachelor of Ayurveda (B.A.V.)*

2. (a) No candidate shall be admitted to the examination for the Degree of Master of Surgery unless he produces a certificate showing that—

- (1) Having passed the M.B. & B.S. Degree Examination of this University, he has been engaged for five years continuously in the practice of medical profession; provided he works for six months in a recognised teaching institution immediately before taking the Examination; or
- (2) after having passed the M.B. & B.S. Degree Examination has passed three years out of which he has spent two and half years in hospital practice; or
- (3) having passed the M.B. & B.S. Degree Examination in the first class, he has passed one and half years in hospital practice.

II Every candidate for the M.S. Degree Examination shall attend a course of post-graduate lectures extending over a period of nearly six months preceding the examination.

- (a) Duration: 5 years.
Theoretical training—4 years.
Clinical training—1 year.

(b) Courses :

- (i) *First B.A.V. Examination—*

(iv) *Degree of Bachelor of Ayurveda (B.A.V.)*

- (1) Human Anatomy.
- (2) Physiology.
- (3) Sutra and Sarira based on texts like Susrutha and Astanga Hrudaya.

(ii) *Second B.A.V. Examination—*

- (1) Pathology including Bacteriology (Nidanam).
- (2) Materia Medica (general)—Dravyagunam Paribhusha and Kalpam.

(3) *Materia Medica* (special)—Rastantram and Western *Materia Medica*.

(4) *Hygiene* (*Swastha-vrittam*).

(iii) *Final B.A.V. Examination—*

(1) *Medicine* (*Kayachikitsa*, *Rassahanam*, *Vaaje—Karana*, *Bhoota Vaidya* including *Manasa-Vaishamya*).

(2) *Surgery* (*Salyam* and *Sakalyaka*).

(3) *Ophthalmology*.

(4) *Obstetrics, Gynaecology and Pediatrics* (*Prasuit tantram*, *Stritchikitsa*, and *Balarishtam*).

(5) *Toxicology* including *Forensic Medicine*.

XVI. (i) *Degree of Bachelor of Laws (B.L.)*

1. Candidates for the Degree of Bachelor of Law shall be required :—

(a) to have passed the first examination in Law of this University.

(b) to have undergone subsequently a further course of study in the University College of Law as prescribed hereunder extending over a period of one year; and to have passed the examination for the degree hereinafter prescribed.

2. Candidates for the first Examination in Law shall be required :—

(a) to have passed a degree examination of this University or a degree examination of some other University recognised by the Academic Council as equivalent thereto, or the Law Preliminary examination of this University prescribed hereunder, and

(b) to have undergone subsequently a further course of study in the University College of Law as prescribed hereunder extending over a period of one year.

3. Candidates for the Law Preliminary examination shall be required :—

(a) to have passed the Intermediate examination of this University or an examination of some other University recognised as equivalent thereto, and

(b) to have undergone subsequently a further course of study in the University College of Arts as prescribed hereunder extending over a period of one year.

4. The course for the Law Preliminary examination shall comprise instruction in the following subjects :—

(1) English based on prescribed books of Socio-politico legal interest.

- (2) History of Social Institutions.
- (3) Political Theory and Organisation.
- (4) Outlines of European History.

5. The course for the First Examination in Law shall comprise instruction in the following subjects:—

- (1) Jurisprudence.
- (2) Outlines of Roman Law in accordance with a syllabus.
- (3) The Law of Contracts including the Indian Contracts Act, the Negotiable Instruments Act and the Specific Relief Act.
- (4) The Law of Torts.
- (5) Criminal Law (comprising the Indian Penal Code and General Principles of Criminal Liability).

6. The course for the B.L. Degree shall comprise instruction in the following subjects:—

- (1) Property—General Principles including Trusts and Easements.
- (2) Property—Transfer of Property Act (Specific Transfers).
- (3) Hindu Law.
- (4) Mohammadan Law and the Indian Succession Act.
- (5) Constitutional Law of India along with a general survey of the constitutions of Great Britain and the Dominions.
- (6) The Law of Evidence.
- (7) Elements of Public International Law (Peace).

7. (a) A candidate for the first Law Examination or the B.L. Examination shall be declared to have passed if he obtains not less than forty per cent of the total marks and not less than one-third of the marks in each division of the examination.

(ii) *Degree of Master of Laws (M.L.)*

B.L. Degree holders have to study under the supervision of an approved Director for 2 years, submit monthly reports and at least eight Essays and undergo written examination in one of the following branches:—

1. Hindu Law.
2. Jurisprudence and Roman Law.
3. Comparative Constitutional Law.
4. International Law.
5. Contracts and Mercantile Law.
6. Crime and Tort.
7. Property Laws.

There shall be four papers in each of the above branches, each of three hours' duration and each carrying 100 marks.

Candidates shall obtain not less than $\frac{1}{3}$ of the marks in each paper and not less than 40 per cent on the whole in the written examination.

(iii) *Degree of Doctor of Laws (D.L.)*

The D.L. Degree is awarded by thesis. M.L. Degree holders of two years' standing are eligible for submitting thesis for the D.L. Degree.

XVII. F.E. and B.E. Examinations

1. *Qualifications for Admission.*—Candidates for admission to the Bachelor of Engineering Examination shall have passed the I.Sc. or the I.A.Sc. Examination with Physics, Chemistry and Mathematics (as optional subjects) of this University or any other University recognised as equivalent thereto.

The students admitted to the above course shall be required to undergo a course of study in an affiliated College of Engineering for a period of four Academic years.

First Examination in Engineering

2. (a) *Scheme of Examination.*—The examination shall consist of two parts—Part I and Part II. Candidates for Parts I and II shall undergo the course of studies prescribed for each of the parts for a period of not less than one academic year.

Subjects under Part I:—

1. Mathematics I.
2. Mathematics II.
3. Physics.
4. Chemistry.
5. Applied Mechanics I.
6. Civil Engineering I.
7. Mechanical Engineering I and Electrical Engineering I.
8. Practical Geometry.
9. Building Drawing.
10. Machine Drawing.
11. Surveying.
12. Workshop.

Subjects under Part II:—

13. Mathematics III.
14. Applied Mechanics II.
15. Civil Engineering II.

Part II

10. Strength of Materials and Theory of Structures II.
11. Hydraulics and Hydraulic Machinery II.
12. Surveying II.
13. Irrigation.
14. Sanitary Engineering.
15. Structural Engineering.
16. Structural Engineering and Design and Drawing II.
17. Design and Drawing (Irrigation and Sanitary Engineering).
18. Project including Drawing, Estimating and *Viva Voce*.

Mechanical Engineering :—**Part I**

- (i) Mathematics.
- (ii) Strength of Materials and Theory of Structures I.
- (iii) Hydraulics I.
19. Heat Engines I.
20. Theory of Machines I.
21. Fuels, Gas Plants and Boilers.
22. Electrical Technology I.
23. Metallurgy.
24. Machine Drawing and Design I.
25. Workshop I.

Part II

26. Hydraulic Machinery.
27. Heat Engines II.
28. Automobile Engineering.
29. Electrical Technology II.
30. Workshop Practice and Machine Tools.
31. Theory of Machines II.
32. Engineering Economics.
33. Applied Electronics.
34. Design and Drawing II.
35. Workshops II.

Electrical Engineering :—**Part I**

- (i) Mathematics.
- (ii) Strength of Materials and Theory of Structures I.
- (iii) Hydraulics I.
36. Mechanical Technology I.
37. Engineering Electronics I.

38. Electrical Machinery I.
39. Metallurgy.
40. Elec. Design and Drawing I.
41. Workshops I.
42. Industrial Economics and Administration.

Part II

43. Mechanical Technology II.
44. Hydraulic Machinery.
45. Electrical Machinery II.
46. Electrical Power I.
47. Electrical Power II.
48. Water Power Engineering.
49. Electrical Measurements.
50. Engineering Electronics II.
51. Electrical Design and Drawing II.
52. Workshops II.

(c) *Percentage of marks for a pass.*—A candidate shall be declared to have passed the examination if he obtains 35 per cent of the marks in each of the written papers and 50 per cent marks in (a) Practical and Sessional work in each subject and (b) in the aggregate.

(d) *Classification of successful candidates.*—Candidates who have passed Parts I and II of the examination on the first occasion of their appearing therefor, shall be ranked in the order of proficiency as determined by the total marks obtained by each in both parts, and shall be arranged in two classes, the first class consisting of those who have obtained not less than 60 per cent of the marks in the aggregate and the second class consisting of all others.

Candidates who pass in the first class and who obtain not less than 66 per cent of marks in the aggregate shall be deemed to have passed with Honours.

Candidates who pass the whole examination at a subsequent appearance or subject by subject shall be separately ranked in the second class.

XVIII. Oriental Title Examinations

(a) Duration: Four years (b) Courses.

- (1) *Vidya Praveena*: Preliminary Examination (4 papers);
Final Examination (4 papers).
- (2) *Bhasha Praveena*: Admission Text Examination (3 papers);
Preliminary Examination (5 papers); Final Examination
(5 papers).

(3) Certificate of Proficiency—1 paper of 3 hours.

(4) Marks qualifying for a pass in—(i) Preliminary and Final examination 40 per cent; (ii) First class 60 per cent and above; Second class 40 per cent and above.

TITLE OF EXAMINATION FEES

Examination

Fee. Rs.

Matriculation Examination	..	..	..	23
Intermediate Examination—				
Whole Examination	..	..	..	36
Part I only	..	..	..	17
Part II only	..	..	..	15
Part III only	..	..	..	26

Provided that no candidate shall pay more than Rs. 36 at a time whatever be the number of parts in which he appears.

Note.—In the case of candidates with Science subjects, an additional fee of Rs. 3 for each Science subject shall be charged.

Pre-University Examination :

Whole Examination	..	..	..	32
Part I Languages	..	..	..	20
Part II Optionals	..	..	..	20

B.A. Pass Degree Examination—

Whole Examination	..	..	..	55
Part I only	..	..	..	25
Part II only	..	..	..	15
Part III only	..	..	..	30

B.A. (Hons.) Degree Examination—

Preliminary Examination (Whole)	..	..	..	20
Preliminary Examination English only	..	..	..	15
Preliminary Translation or Early South Indian History or the History of England, etc., only	..	..	..	15
Final Examination	..	..	..	70

M.A. Degree 50

M.A. Degree in International Relations 80

M.A. (Hons.) Degree Examination—

Thesis and Written (Whole Examination)	..	..	..	100
Written Examination	..	..	..	60
For submitting revised thesis	..	..	..	60

				<i>Fee Rs.</i>
Ph.D Degree Examination	..	..	..	250
Ph.D. for submitting a revised thesis	..	..	..	125
B.Com. Pass Degree Examination—				
Whole Examination	..	..	..	60
Part I	..	..	..	15
Part II	..	..	..	15
Part III—Group A	..	..	..	20
Group B	..	..	..	20
Parts I and II	..	..	..	20
B.Com (Hons.) Degree Examination—				
Part I (Preliminary Examination)	..	..	..	25
Part I (a)	..	..	..	20
Part I (b)	..	..	..	15
Part II	..	..	..	65
M.Com. Degree Examination—				
Preliminary Examination	..	..	..	25
Final Examination	..	..	..	45
M.Com. (Hons.) Degree by Research	..	..	..	100
For submitting a Revised Thesis	..	..	..	60
B.Sc. (Ag.) Degree Examination—				
First Examination (Whole)	..	..	..	30
Second Examination (Whole)	..	..	..	35
Third Examination (Whole)	..	..	..	40
Fee for one subject	..	..	..	15
Fee for two subjects	..	..	..	25
Fee for three or more subjects	..	The fee prescribed for the whole examination		
Registration fee for research leading to M.Sc. Degree in				
Agriculture Examination	..	..	..	25
B.Sc. Pass Degree Examination—				
Part I	..	..	..	15
Part II—Main subject and two subsidiary subjects	..	..	..	55
„ Main subject	..	..	..	30
„ Two subsidiary subjects	..	..	..	30
„ Each subsidiary subject	..	..	..	20

B.Sc. (Hons.) Degree Examination (Mathematics)—

Part I (Whole)	..	..	..	20
Part I (a) or Part I (b)	..	..	..	15
Part II (Whole)	..	..	..	70
Part II (a)	..	..	..	30
Part II (b)	..	..	..	45

**B.Sc. (Hons.) Degree Examination Physical and Natural
Science subjects—**

Part I (Whole)	..	..	..	20
Part I (a) or Part I (b)	..	..	..	15
Part II (Whole)	..	..	..	70
„ Main subject	..	..	..	45
„ Two subsidiary subjects	..	..	..	30
„ One subsidiary subject	....	..	..	20
„ Mathematics subsidiary to Chemistry Main	..	..	..	15

**B.Sc. (Hons.) Degree Examination (General Chemical) Tech-
nology as Main—**

Part I (a) Mathematics	..	..	..	15
„ (b) Physics	..	..	..	20
„ (c) Chemistry	..	..	..	25
„ (d) General Engineering (Whole Examination)	..	..	..	25
„ (e) Pharmaceutical Botany	..	..	..	20
Part I, Physics, Chemistry and General Engineering	..	..	..	60
Part I, Physics, Chemistry General Engineering and Phar- maceutical Botany	..	..	..	75
Part II	..	..	..	35

B.Pharm. Degree Examination—

Part I (a) Zoology	..	..	..	20
(b) Botany	..	..	..	20
(c) Chemistry	..	..	..	20
(d) Physiology	..	..	..	20
(e) Pharmacology	..	..	..	15
(f) Bacteriology	..	..	..	20
Part I—Zoology, Botany and Chemistry	..	..	..	55
Part I—Physiology, Pharmacology and Bacteriology	..	..	..	50
Part II	..	..	..	70
M.Sc. in Statistics	..	..	..	70
M.Sc. in Mathematical Physics	..	..	..	45

	<i>Fee Rs.</i>
M.Sc. Examination in Physical and Natural Science subjects—	
Thesis and Written—Whole Examination	100
Written and Practical Examination .. .	70
Thesis	70
For submitting in revised thesis	60
M.Sc. Examination for B.Sc. Pass (First or Second Class) and for B.Sc. (Hons.) (Third Class) at the end of first year ..	45
M.Sc. in Applied Physics	70
Do. Examination for Pass graduates at the end of first year ..	30
M.Sc. in Nuclear Physics	70
M.Sc. in Chemical Technology .. .	70
M.Sc. in Ore-Dressing	70
M. Pharm. Degree Examination in either Branch	70
Examination in German for Pass graduates	15
M.Sc. in Applied Geology .. .	70
M.Sc. Examination for pass graduates at the end of the first year.	20
* D.Sc. Degree Examination	250
* For submitting a revised thesis	125
B.Ed. Degree Examination—	
Whole Examination .. .	35
Practical Examination only	15
Written Examination only .. .	20
M.Ed. Degree Examination (Old Regulations)	125
M.Ed. Degree Examination (New Regulations)	80
Examination at the end of the first year	30
Examination at the end of the second year including Dissertation and Viva Voce	50
Examination at the end of the Second year only	30
Dissertation and Viva Voce only	30
M.Sc. in each of the Medical subjects (Thesis and Examination).	150
Thesis only	100
Written and Practical Examinations only	150
Revised thesis	80
Examination Fee for diploma in each of the Medical subjects ..	152
M.D. Degree Examinations	250

* The fee for D.Sc. in the Faculty of Science is the same as that for D.Sc. in Faculty of Medicine.

				<i>Fee</i>	<i>Rs.</i>
M.S. Degree—Whole Examination	..	..	..	250	
„ Part I	..	..	..	75	
„ Part II	..	..	..	175	
M.B.B.S. Degree Examination					
First M.B.B.S. Examination—					
Part I Chemistry	..	..	..	20	
Part II Whole Examination	..	..	..	55	
Part II Each subject	..	..	..	30	
Second M.B.B.S. Examination—					
Whole Examination	..	..	..	60	
Part I only (Pharmacology)	..	..	..	25	
Part II only	..	..	..	40	
Each subject under Part II separately—					
Hygiene or Pathology including Bacteriology	..	..	..	25	
Final M.B.B.S. Examination—					
Whole Examination	..	..	..	80	
Part I only	..	..	..	30	
Each subject under Part I separately—					
Ophthalmology or Forensic Medicine	..	..	..	20	
Part II only	..	..	..	60	
Each of the following subject under Part II separately—					
Medicine or Surgery	..	..	..	25	
Obstetrics and Gynaecology	..	..	..	20	
M.Sc. in each Medical subject (Thesis for Examination)	..	..	..	250	
Thesis only	..	..	..	100	
Written & Practical Examination only	..	..	..	150	
Revised Thesis	..	..	..	80	
Diploma in each of the Medical Subjects	..	..	..	125	
M.D. Degree Examination	..	..	..	250	
M.S. Degree Exam.—Whole Exam.	..	..	..	250	
„ Part I	..	..	..	75	
„ Part II	..	..	..	175	
Registration fee for the Courses of study leading to any of the M.Sc. or diploma Exams. in Medical Subjects or M.D. or M.S. Degree Examination	..	..	..	50	
Law Examinations—					
Law Preliminary Examination	..	..	..	40	
Do. Part I	..	..	..	20	
Do. Part II	..	..	..	25	
First Examination in Law	..	..	..	50	
Do. for each division	..	..	..	30	

			Fee Rs.
B.L. Degree Examination	..	.	60
Do. for each division	..	..	30
M.L. Degree Examination	..	..	150
Oriental Title Examinations—			
Vidya Praveena—Preliminary or Final	..	..	25
Bhasha Praveena—Entrance Test	..	..	10
Bhasha Praveena—Preliminary or Final	..	..	25
Bhasha Praveena—Sanskrit only	..	..	10
Bhasha Praveena—Modern Indian Language only	..	..	15
Alim-i-Fazil, Munshi-i-Kamil, Adib-i-Fazil and Tabib-i-Kamil—			
Entrance Test	..	..	10
Preliminary or Final	..	..	25
Certificate of Proficiency	..	..	15
Master of Oriental Learning	..	..	125
Diploma in Hindi (Final)	..	..	30
Do. Preliminary Examination in Hindi	..	..	10
Diploma in Librarianship—			
Whole Examination	..	..	30
Three months' Certificate course in Librarianship	..	..	15
Each group	..	..	15
Diploma in Music	..	..	25

ENCLOSURE II

Item 5: *Subjects in which facilities for post-Graduate and Research Work exist in the Andhra University Colleges, Waltair.*

ART DEPARTMENTS :

- (i) *English*: Post-Graduate and Research work is done in the department.
- (ii) *Telugu* :
 1. Facilities for Research work for M.A. (Hons.) and Ph.D. degrees, are available.
 2. There is Library equipped with Literature in Telugu.
 3. Scholarships and Fellow doing research are available (only Students of this University).
- (iii) *Sanskrit* :
 1. Sanskrit Language and Literature.
 2. Pali, Buddhism. Migration of Buddhism, Indian Culture to the East and North-Eastern Asia.
 3. Early Indo-Iranian Relations Avesta and Zorostranism and old Persian (Inscriptions).

- (iv) *Mathematics*: Functions of a real variable, Functions of a Complex variable, Analysis, and some parts of Theory of Numbers.
- (v) *Law*: Facilities for Post-Graduate work in
 1. Law of Property—Branch VII in M.L.
 2. Contracts and Mercantile Law—Branch V in M.L.
- (vi) *History and Politics*: Ancient and Mediaeval Indian History and Development of the present Indian Constitution.
- (vii) *Economics and Sociology*: Public Finance Money and International Trade and Economic Thought, Agriculture Economics, Labour Economics and Social Security.
- (viii) *Philosophy*: Specially in Indian Philosophy—Nyaya, Vaisesika-Vedanta.
- (ix) *Commerce*: M.Com. Hons. and Ph.D.

SCIENCE DEPARTMENTS :

- (i) *Physics*: Atomic and Molecular Spectra in the Infra-red Visible and Ultra-Violet regions.
Micro-waves, Spectroscopy.
Ultra-Sonics, Dielectrics and Wireless. Nuclear Physics, Fluorescence Studies.
- (ii) *Chemistry*: 1. Photo-chemistry, Catalysed and induced reactions, Analytical Chemistry, Analytical applications of Organic Reagents, Chemistry of Anthocyanins, Lichen Products, Natural and Synthetic Insecticides and fish poisons, Chemistry of Rare Earth and Rare Elements.
- (iii) *Technology*: 1. Heat transfer Fluid flow, Distillation Liquid Extraction, Diffusional Operations, Applied Reaction, Kinetics and Electrolytic Reduction and Oxidation.
2. Phase Equilibria.
3. Electric-Chemical Technology.
4. Atomisation and Spray Drying.
5. Ore Dressing.
- (iv) *Statistics*: Stochastic processes, Statistics and Test Functions.
- (v) *Mathematical Physics*:
Group Theory and Applications to Physics.
Operational Theory and application to Physics.
Eigen Problems.
- (vi) *Applied Physics*: Applied Optics.

(vii) Geophysics: Branch I (Meteorology and Oceanography) :

- (a) Eddy Flux of Energy in the Atmosphere.
 - (b) Turbulence in the lowest layers of the atmosphere.
 - (c) Oceanography and
 - (d) Nocturnal Radiation.
1. Cloud Physics and Physics of Precipitation.
 2. Ozone distribution in the upper atmosphere.
 3. Studies of the D. Region absorption in the Ionosphere.
 4. Atmosphere in Relation to weather.

Branch II (Physics of the Earth).

- (a) Study of magnetic hysterics in rocks by Oscillographic methods.
- (b) Application of alternating current magnetic separation to the beneficiation of low-grade manganese ores.
- (c) Pulse methods of studying Ultrasonic velocities in solids.
- (d) Radio active studies in the location of radium and uranium minerals.

(viii) Pharmacy: Lichen substances—Insecticides and Fish Poisons, Cardiac glycosides—Plant Pigments, Synthetic Drugs.

- (ix) Botany:** (1) Morphology and Embryology of angiosperms.
 (2) Cytology and cytogenetics (to a limited extent only).
 (3) Plant Physiology.

(x) Geology: Ore Dressing, mining geology, prospecting mineral economics and water supply, metamorphic petrology, igneous petrology, sedimentary petrology, ore beneficiation, structural petrology, X-ray crystallography, ultrasonic methods in geological work, spectro-chemistry, advanced optical mineralogy, petro-chemistry, mineral chemistry and Economy geology.**(xi) Zoology: Parasitology and Marine Biology.**

Item 6:—No scholarships are available for students from foreign countries.

Enclosure

Statement of receipts and charges for 1951-52.

ANDHRA

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RECEIPTS		CHARGES	
	Rs. A. P.	Rs. A. P.	Rs. A. P.
Opening Balance		12,59,820 6 7	6,26,700 7 0
1. Govt. Grant—			
(a) Recurring			
Provincial—General ..	1,50,000 0 0	Establishment charges	..
Colleges ..	2,21,200 0 0	Cost of Chemicals, etc.	..
(b) Non-recurring ..	3,71,200 0 0	Library Books etc.	..
Provincial—General	27,658 0 0	T.A.	..
Buildings and Equip-		Examination charges	..
ment ..	8,35,600 0 0	Printing of S.S.L.C. and other publica-	52,977 11 0
Central—For Research	50,000 0 0	tions	..
in Department ..		Medals and Prizes	..
Buildings and Equip-	1,10,000 0 0	Scholarships	..
ment ..		Hostel charges	..
	10,23,258 0 0	Carried over	21,645 4 0
Carried over			17,56,211 14 2

RECEIPTS			CHARGES		
Brought forward	26,54,278	6 7	Brought forward	17,56,211	14 2
2. Contribution and Endowments.	30,404	0 0	Buildings constructions	..	8,90,801 11 0
3. Fees—			Miscellaneous charges	..	5,28,808 1 6
College	2,76,189	9 0	Closing balance	..	22,33,256 0 5
Examinations	9,29,572	1 0			
	12,05,761	10 0			
4. Other items—					
Hostel Fees	50,181	12 3			
Sale of Publications	87,350	8 11			
Interest	2,97,483	9 0			
Miscellaneous	5,55,474	4 11			
	9,90,490	3 1			
Amount realised on F.D. Receipts	23,52,823	7 0			
Deduct amount invested in securities	72,33,757	10 8			
	(—)	18,24,679 15 7			
Total	54,09,077	11 1	Total	54,09,077	11 1

Statement of Receipts and Charges for 1952-53

ANDHRA

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RECEIPTS			CHARGES		
	Rs.	A. P.	Rs.	A. P.	Rs. A. P.
Opening Balance			22,33,256	1 7	7,95,819 6 0
1. <i>Govt. Grant—</i>					
(a) <i>Recurring</i>					
State—General	1,50,000	0 0	Establishment charges	..	3,68,111 0 9
Colleges	2,39,400	0 0	Cost of chemicals	..	54,107 13 9
Central Colleges	70,000	0 0	Library books etc.	..	45,844 12 0
(b) <i>Non-recurring</i>			T.A.	..	6,22,624 11 3
State—General, Build- ings & Equipment	1,52,500	0 0	Examination charges	..	43,746 14 0
Central—Research in Departments	—		Printing of S.S.L.C. & other Publications.	..	3,574 5 0
—Buildings and Equip- ment	3,40,000	0 0	Medals and Prizes	..	60,604 1 0
2. Contributions and Endowments.			Scholarships	..	3,252 14 9
3. <i>Fees—</i>			Hostel charges	..	4,72,488 5 9
Colleges	2,84,000	1 0	Buildings constructions	..	24,70,174 4 3
Examinations	8,77,400	0 0	Carried over		
Carried over			11,61,400	1 0	
			* 4,35,448	0 0	
			47,82,004	2 7	

Statement of Receipts and Charges for 1953-54

RECEIPTS

CHARGES

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		ANDHRA	
	Rs. A. P.	Rs. A. P.	Rs. A. P.
Opening Balance	23,65,783 2 6	Establishment charges	8,79,081 13 0
1. Govt. Grant—		Cost of Chemicals etc.	3,66,168 4 8
(a) Recurring		Library Books etc.	60,010 0 5
State—General	1,50,000 0 0	T.A.	39,535 0 0
Colleges	2,39,400 0 0	Examination charges	6,87,947 6 6
Union—Colleges	35,000 0 0	Printing of S.S.L.C. and other Publications	81,472 7 9
(b) Non-recurring	4,24,400 0 0	Medals and Prizes	3,716 14 0
State—General Build- ings & Equipment	—	Scholarships	68,557 6 3
Union—Research in Departments	30,500 0 0	Hostel Charges	31,189 11 6
Buildings and Equip- ment	1,04,000 0 0	Buildings constructions	2,95,547 5 0
2. Contributions and Endowments.	39,410 0 0		

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ANNAMALAI UNIVERSITY

ANNAMALAINAGAR

Introductory

The Annamalai University of Annamalainagar, Chidambaram, constituted under an Act of the Madras Legislature, owes its existence to the generous offer by Dr. Rajah Sir Annamalai Chettiar of Chettinad, of the collegiate institutions founded and managed by him at Chidambaram and a sum of Rs. 20 lakhs towards the endowment funds of the University. The Government of Madras enthusiastically responded to the offer by a contribution of Rs. 27 lakhs. The University is unitary, teaching, and residential in character, the first of its kind in South India. In addition to the Faculty of Arts and Science, it has provision for a Faculty of Oriental Learning with a view to giving special importance to the study of Tamil, Sanskrit and Indian History, Indian Music and other subjects, in which special facilities for advanced study and research exist in this part of the country. Since 1945, a Faculty of Engineering and Technology has been instituted with provision for courses of study leading to the award of the degree of B.E. in Civil, Mechanical and Electrical Engineering branches and of B.E. (Chem.) in Chemical Engineering. Besides direct teaching and research, the system of tutorial instruction is an additional special feature of this University. The Teaching staff is so organised as to make it possible for special and individual attention being given to the students.

In 1953, additional Faculties of Education and Fine Arts were instituted, the latter with provision for Degree and Diploma courses in Music, and Diploma courses in Architecture, Sculpture, Painting, Drama and Dancing. In the Faculty of Arts, new Departments for courses of studies in Civic, Rural and Social Welfare and Commerce have also been instituted.

In the Faculty of Science new Departments of Agriculture, Geology and Statistics providing instruction for courses leading to B.Sc. Degree have been instituted. In Geology and Statistics instruction is offered upto courses leading to B.Sc. (Hons.) Degree. Instruction is offered in Ore-dressing in the Department of Technology as one of the subjects for the B.Sc. Degree. New courses of study leading to the M.Sc. Degree in the Departments of Physics, Chemistry, Botany, Zoology and Agriculture in the Faculty of Science and to the degree of M.O.L. in Tamil in the Department of Tamil (Oriental) have also been instituted.

Officers and Staff of the University

Chancellor :

His Excellency the Governor of Madras.

Pro-Chancellor—Founder :

Dr. Rajah Sir M. A. Muthiah Chettiar of Chettinad, Kt., B.A.,
D.Litt. M.L.A., M.C.A.

Vice-Chancellor :

Diwan Bahadur T. M. Narayanaswamy Pillai, M.A., B.L., M.L.C.

Registrar :

Sri T. D. Meenakchisundaram, B.A., B.L.

Bursar :

Sri M. C. Kalyanasundaram Pillai, B.A., B.L.

Hony. Librarian :

Sri S. V. Aiyar, M.A.

Members of the Teaching Staff :

<i>English</i>	..	Professor M. S. Duraiswami, M.A., 2 Readers, 8 Lecturers and 11 Tutors.
<i>History and Politics</i>	..	Professor R. Sathianatha Aiyar, M.A. 2 Readers and 3 Lecturers.
<i>Rural, Civic and Social Welfare</i>	..	Professor Dr. (Miss) M. Cornelius B.A., L.T., M.A. (Columb.) M.Sc., Ed. D. (Mich. U.S.A.) and 1 Lecturer.
<i>Philosophy</i>	..	1 Professor and 3 Lecturers.
<i>Economics</i>	..	Professor S. Vaidyanatha Aiyar, M.A., 1 Reader and 5 Lecturers.
<i>Commerce</i>	..	1 Reader and 3 Lecturers.
<i>Mathematics</i>	..	Professor Dr. V. Ganapathy Aiyar, M.A., D.Sc., 1 Reader and 8 Lecturers.

<i>Statistics</i>	.. Professor Dr. K. Rangaswami Aiyar, M.A., Ph.D., 1 Reader, 2 Lecturers and 2 Demonstrators.
<i>Physics</i>	.. Professor Dr. K. Venkateswarlu, M.A., D.Sc. 2 Readers, 7 Lecturers and 3 Demonstrators.
<i>Chemistry</i>	.. Professor Dr. V. Baliiah, B.Sc., (Hons.), M.Sc., Ph.D. (Stanford), 2 Readers, 9 Lecturers and 5 Demonstrators.
<i>Agriculture</i>	. Professor Dr. S. Krishnamurti, B.Sc. (Agri.), M.Sc. (Calif.), Ph.D. (Mich.) and 5 Lecturers.
<i>Geology</i>	.. One Professor and 3 Lecturers.
<i>Botany</i>	.. Professor Dr. T. C. N. Singh, M.Sc., D.Sc., 1 Reader, 3 Lecturers and 2 Demonstrators.
<i>Zoology</i>	.. Professor R. V. Seshaiya, M.A., 1 Reader, 4 Lecturers and 2 Demonstrators. 1 Research Assistant.
<i>Tamil (Arts)</i>	.. Professor Dr. A. Chidambaranatha Chettiar, M.A., Ph.D., 1 Reader, 3 Tutors and 5 Lecturers.
<i>Tamil (Oriental)</i>	. Professor L. P. Kr. Ramanathan Chettiar, Pandita, Vidwan, 1 Reader and 10 Lecturers.
<i>Tamil Research Section</i>	.. Professor, G. Subramania Pillai, M.A., B.L., 6 Lecturers and 3 Tutors.
<i>Jubilee Tamil Chair</i>	1 Reader and 3 Lecturers.
<i>Sanskrit</i>	.. Professor Dr. C. S. Venkateswaran, M.A., Ph.D. Siromani, and 7 Lecturers.
<i>French and German</i>	.. 1 Reader.
<i>Urdu</i> }	.. 1 Lecturer.
<i>Hindi</i> }	
<i>Physical Education</i>	.. Professor and Director S. Shanmugasundaram and 5 Lecturers.
<i>Music</i>	.. Professor M. M. Dandapani Desigar, 1 Reader and 9 Lecturers.

<i>Engineering</i>	.. Professor P. Rajagopala Pillai, B.A., A.I.I.Sc., Head of the Department.
<i>Civil</i>	.. 2 Professors, 7 Readers, 7 Lecturers, 1 Lab. Asst., and 1 Draftsman.
<i>Mechanical</i>	.. Sri C. Rajaram, B.A., B.E., Offg. Prof. 2 Readers, 5 Lecturers, 1 Lab. Asst., and 1 Draftsman.
<i>Electrical</i>	.. 1 Professor, 2 Readers, 4 Lecturers, 2 Lab. Assts., and 1 Draftsman.
<i>General</i>	.. 1 Reader and 6 Lecturers.
<i>Workshop</i>	.. 1 Reader and 1 Lecturer.
<i>Technology</i>	.. Professor N. P. Palaniappan, M.Sc., M.Sc. (Tech.) (Manch.), 2 Readers, 5 Lecturers and 2 Demonstrators.
<i>Education</i>	.. Professor R. Ramanujachariar, M.A., and 2 Lecturers and Part-time Lecturers.

Constitution of the University

The principal authorities of the University are the Senate, the Syndicate, the Academic Council, the Faculties, the Boards of Studies and the Board of Selection.

The Vice-Chancellor is the Principal Executive Officer of the University.

All the appointments on the teaching staff are made by the Board of Selection, composed in part, of representatives of the Syndicate and the Senate.

Scholarships, Medals and Prizes

A number of scholarships are awarded on the basis of merit and poverty. In the Oriental Faculty, stipends to meet boarding charges are given to students. There are a large number of endowed prizes, scholarships and medals awarded by the University for proficiency in the examinations. The Prize Endowment Fund amounts to Rs. 90,000 and the proceeds of the Fund are utilised towards the award of prizes and medals in accordance with the conditions of award relating to the several endowments.

Endowments valued at Rs. 1,65,800 in cash and 118.75 acres of land were founded by the Tiruppanandal Mutt, the annual income from which is to be utilised for (1) the award of prizes and (2) the publication of Tamil Works, Literature and Grammar.

A gift of Rs. 25,000 has been made by the late Founder,— Pro-Chancellor of the University, Rajah Sir Annamalai Chettiar, towards the development of Tamil Isai Competitions and subsidies to Music Sabhas are also given to further the objects of the Founder.

Library

The University has a Library, the affairs of which are managed by a Committee constituted by the Syndicate. The Library is housed in a separate building constructed and equipped at a cost of Rs. 5,00,000.

The total number of books in the General and Sectional Libraries is over 1,09,199 (including back numbers of periodical and manuscripts.) The nucleus of the Library was the Library of the Sri Minakshi College which included a gift of about a thousand volumes from Mr. V. Venu-gopal Chetty, I.C.S. The Library receives regularly 657 scientific and learned periodicals.

Each department of study has its own seminar library for the use of Honours and Research students.

The Library is open from 10 a.m. to 5-30 p.m. and the text-books section from 7 a.m. to 10 a.m. and from 7 p.m. to 9 p.m. The Library is thrown open to the public.

Provision for Research

There is provision for the award of Studentships and Fellowships to distinguished graduates for research work in different subjects, tenable at the University or abroad, the value of which ranges from Rs. 50 to Rs. 150 per mensem; grants-in-aid for research work are also awarded under certain conditions.

With a view to providing for the advancement of learning in Tamil, a research department in Tamil with a special staff is working under the guidance of a Professor.

Publications and Research

The University generally undertakes the publication of the results of research work, lectures delivered and other theses and monographs.

The University publishes, in two issues a year, a *Research Journal* which embodies the research work of members of the Teaching Staff and research students.

GENERAL

With a view to the ultimate adoption of Tamil as the medium of instruction in the University, the Syndicate instituted prizes for text-books in Tamil on various subjects. So far books in Tamil on Logic, Physics, Chemistry, Botany, History of India, Economics Practical Chemistry, Trigonometry and Algebra, Practical Physics and Geometry.

Physics, Chemistry, Botany, History of India, Economics, Practical Chemistry have been published. The Heads of Departments of Studies have been requested to arrange for getting ready manuscripts of textbooks in the other optional subjects for use in the Intermediate classes and in the several optional subjects suitable for use in the Pass Degree courses.

General Council of Associations

There is a General Council of Associations, membership of which is open to all students of the University. The constitution is based largely on that of the Union at Oxford. The Association elects its Chairman and Secretary and its affairs are controlled by a Council consisting of staff and student-members. There are, besides the Association, a number of Societies in connection with the various subjects of study, and papers are read and lectures delivered before those societies at intervals. The University has also a Dramatic Club. A special hall has been built for the Association to conduct its meetings and other activities.

Residence, Health and Discipline

Physical Training is compulsory for all students of the University. The University has extensive play-fields. A spacious Sports Pavilion has been constructed. Ample facilities exist for Boating, with a canal 3 miles long.

Every student is required as a condition of admission to the University to reside (either in the Hostels maintained or recognised by it or in approved lodgings) for not less than 80 per cent of the number of days in a term in each academic year.

There are eleven sections in the Hostel under the general supervision of the Warden. There is accommodation at present for 1,800 students, in the residential blocks. There is a separate Hostel for Women students.

A dispensary with an isolation ward is maintained for the benefit of the students and the staff. There is a Medical Officer and a Sanitary Inspector on the Staff of the University. Medical Inspection is compulsory for all students and is conducted by the Medical Officer in co-operation with the Director of Physical Education.

Quarters for the compounder, midwife and the ward-boy have also been provided.

Admission to the University Courses of Study and Examinations

Statement of latest figures for total number of students in the University :—

Total number of students—2,709

{ Boys—2,507
Girls— 202

The University awards in the Faculty of Arts the degrees of B.A. (Pass and Honours), M.A., M.Litt., Ph.D. and D.Litt.; in the Faculty of Science, the degrees of B.Sc. (Pass and Honours), M.A., M.Sc. (by research and by examination), Ph.D. and D.Sc.; in the Faculty of Oriental studies, the degrees of B.O.L., M.O.L. (by research and by examination), besides Pulavar, Vidwan and Siromani Titles; in the Faculty of Engineering and Technology the degrees of B.E. (Civil, Mechanical and Electrical) and B.E. (Chem.); in the Faculty of Fine Arts, the degree of B.Mus., the Sangita Bhushana Title, the Certificate in Tamil Music and the Diplomas in Painting, and Elocution and Drama; and in the Faculty of Education, the B.Ed. degree.

Admission to Courses of Study

To be eligible for Matriculation and admission to a course of study in the University, candidates should have passed the Matriculation Examination of an Indian University or the S.S.L.C. Examination of a recognised Board under the conditions prescribed in this behalf.

1. The Intermediate Examination

Entrance Qualifications: A Pass in the Matriculation Examination of a statutory Indian University, the S.S.L.C. Public Examination conducted by the Madras and Travancore-Cochin States and the European School Leaving Certificate Examination of the Government of Madras. The admission of candidates passing certain other examinations of equal standard are decided on the merits of each case.

Duration of the Course: The course extends over a period of two years and consists of three Parts as hereunder:

Part I :—English.

Part II :—A Second Language.—The course will comprise the study of text-books, grammar and translation and in the case of vernaculars, original composition. The main object of the study of the languages is to train the students to use them as vehicles of modern thought.

1. Classical : Sanskrit.
2. Modern European : French, and German.
3. Indian : Tamil, Malayalam, Telugu, Canarese, Hindi and Urdu.

Part III :—Three subjects to be selected out of the following groups A, B, C and D at the option of the candidates :—

Group A.

Mathematics
Physics
Chemistry
Natural Science
Geography
Agriculture

Group B.

Logic
Psychology
Elements of Politics
World History
Elements of Economics
A third Language (Sanskrit, Tamil, French, Malayalam, Hindi or Urdu).

Group C.

Economic History of England
and Economic Geography,
Indian Music

Group D.

Subject prescribed for the Preliminary Division of the Examination for any one of the Oriental Titles.

There are three papers in English, two in the second language and two papers in each of the three subjects selected under Part III.

Candidates obtaining 35 per cent of the aggregate marks in Part I and Part II and in each of the three subjects under Part III shall be declared to have passed the Examination. Those obtaining 60 per cent or over of the total marks in all the three parts put together will be placed in the first class those obtaining 50 per cent and above but less than 60 per cent in the second class and others in the third class. Those obtaining not less than 70 per cent of the marks in any subject shall be declared to have gained distinction in that subject.

Candidates wishing to proceed to a degree course in Arts or Science shall be required to choose at least two of the optional subjects either from Group A or Group B. A separate practical examination in Science Subjects with marks assigned to it is a special feature.

2. Degree of Bachelor of Arts and Bachelor of Science

Entrance qualifications. A pass in the Intermediate examination of this or a statutory University or an examination recognised as equivalent thereto, qualifies for admission to the B.A., or B.Sc. Degree course.

Duration of the course. The B.A. Degree and B.Sc. Degree courses shall extend over a period of two years leading to an examination comprising the following :—

Part I : English—The course shall comprise two plays of Shakespeare, Modern English Prose, and Poetry text-books prescribed for detailed study, and Prose texts for non-detailed study, the scope being indicated by the provision of eight hours' teaching per week for two years. The examination shall consist of four papers and shall be taken along with those in other parts at the end of the second year.

Part II : A second Language (Sanskrit, Tamil, Telugu, Malayalam, Canarese, French, German, Hindi and Urdu). Part II shall consist of two papers in a second language, the first on prescribed text-books comprising more of Modern Prose and less of Modern Poetry in that language and the other on Composition and Translation, the scope being indicated by four hours' teaching per week and the examination being taken along with those in other parts at the end of the course of two years.

Parts III and IV : Optional subjects :—Any two of the following subjects, one under each of the two parts :—

Leading to the B.Sc. Degree.

- (i) Mathematics. (4 papers)
- (ii) Physics. (3 papers and a practical test)
- (iii) Chemistry (3 papers and two practical tests)
- (iv) Botany (2 papers and two practical tests)
- (v) Zoology (2 papers and two practical tests)
- (vi) Agriculture (2 papers and two practical tests)
- (vii) Geology (3 papers and two practical tests)
- (viii) Ore-dressing (3 papers and two practical tests)
- (ix) Statistics (3 papers and one practical test)

Leading to the B.A. Degree.

- (i) Philosophy (4 papers),
- (ii) History and Politics (4 papers),
- (iii) Economics (4 papers),
- (iv) English, Tamil, Sanskrit, & Malayalam (4 papers),
- (v) Rural, Civic and Social Welfare (3 papers and Field Work).

The main features of the scheme are :—

- (i) The inclusion of English as an optional subject :
- (ii) The introduction of a course in composition and translation in the mother-tongue under Part II ;
- (iii) The division of Arts and Science subjects under the optionals, the former group leading to the award of the B.A. Degree and the latter to the award of the B.Sc. Degree.

The minimum for a pass is 35 per cent. in Part I (English), 35 per cent in Part II (Second Language) and 35 per cent. in each of the selected subjects under Parts III and IV. Successful candidates obtaining not less than 60 per cent of the marks in any Part shall be placed in the first class in that Part and those obtaining less than 60 per cent. and not less than 50 per cent. in the second class and others in the third class.

Degree of Bachelor of Arts (Hons.) and Bachelor of Science (Hons)

A Pass in the Intermediate examination or B.A. or B.Sc. degree examination of this or a recognised University or any other examination recognised as equivalent thereto shall qualify for admission to this course.

For the B.A. (Honours) and B.Sc. (Honours) Degrees the course shall extend over a period of three years for Intermediates and two years for B.A. or B.Sc. graduates each year consisting of three terms and shall comprise instruction in :—

1. English during the first year (Preliminary Examination).

One of the following branches of knowledge during the three years :

Leading to B.Sc. (Honours)

- (i) Mathematics (8 papers)
- (ii) Physics (6 papers and 4 practical tests)
- (iii) Chemistry (5 papers and 3 practical tests)
- (iv) Zoology (6 papers and 4 practical tests)
- (v) Botany (5 papers and 4 practical tests)

Leading to B.A. (Honours)

- (i) Philosophy (8 papers)
- (ii) History (8 papers)
- (iii) Economics (8 papers)
- (iv) (a) English Language and Literature (9 papers)
(b) English with either Sanskrit or Tamil (10 papers)
- (v) Sanskrit Language and Literature (10 papers)
- (vi) Tamil Language and Literature (9 papers)

The minimum for a pass is 40 per cent of the total marks and 30 per cent in each of the three divisions of the Examination in each subject. Candidates obtaining 60 per cent or more of the aggregate marks are placed in the first class and those getting not less than 50 per cent in the second class and those getting less than 50 per cent and not less than 40 per cent in the third class.

Bachelor of Music Degree (B.Mus.)

Admission qualifications. Candidates declared eligible for admission to a University course of study at the S.S.L.C. examination and have either taken music as their optional subject or passed the Government Technical examination in Music (Higher Grade), are admitted. Other S.S.L.C. eligibles will be required to pass an admission test at the University consisting of a practical test in Alamkaras, Gitams and Varnas in accordance with a prescribed syllabus.

The B. Mus. degree is awarded after the successful completion of a four years' course leading to a preliminary examination at the end of the second year and a final examination at the end of the fourth year.

The course is designed not only to train professional musicians but also to train their critical faculty for a proper appreciation of the various systems of Music and pursue higher study and research in the field of Music.

M.A. Degree

On payment of Rs. 25, the M.A. Degree is conferred on B.A. (Hons.) and B.Sc. (Hons.) graduates, after the lapse of 5 years from the date of their passing the Intermediate Examination.

M.Sc. by Examination

Entrance qualification. A pass in the B.Sc. (Honours) Degree Examination or the B.E. Degree Examination, of this University or an examination recognised as equivalent thereto.

For the M.Sc. Degree by Examination the course shall extend over a period of one year, consisting of three terms. It shall comprise instruction in one of the following branches of knowledge : (i) Mathematics, (ii) Physics, (iii) Chemistry, (iv) Zoology, (v) Botany and (vi) Engineering.

The examination shall be conducted by means of written papers and may also be by *Viva voce* and, in subjects which admit of it, candidates shall also be required to undergo a practical examination.

The minimum for a pass is 50 per cent. of the total marks and 40 per cent in each part of the Examination. Candidates obtaining 60 per cent. or more of the aggregate shall be declared to have passed in the First Class.

The course in each branch shall be as follows :—

- (i) Mathematics — Statistics or any other subject prescribed therefor,
- (ii) Physics — Two theory papers, one on 'Modern Physics' and the other on one of the following 'Wireless Communications, Atomic and Molecular Magnetism, Spectroscopy.
- (iii) Chemistry — Two theory papers, two practicals and a thesis.
- (iv) Botany — Four theory papers and two practical tests.
One of the following subjects: Pteridophytes, Gymno-

sperms, Plant Pathology, Cytology and Genetics, Plant Physiology, Plant Ecology.

- (v) Zoology — Two theory papers, one essay or dissertation and one practical. One of the following subjects : Ecology, Embryology, Comparative Physiology, Agricultural Entomology.
- (vi) Engineering — One of the following :—
 - (ii) Public Health Engineering, } For Civil Engineering
 - (i) Structural Engineering ; } Graduates,
 - (iii) Agricultural Engineering — For Mechanical Engineering Graduates.

M.Sc. (Ag.) Degree by Examination

Admission qualifications. A pass in the B.Sc. Degree Examination of the University with Agriculture and one of the Sciences viz. Chemistry, Botany, or Zoology as optionals or any other degree of other statutory Universities considered as equivalent to this degree or in the B.Sc. (Ag.) degree.

Duration. The course extends over a period of two years and shall comprise the study of one of the following subjects :

- (i) Horticulture,
- (ii) Agronomy.

There will be an examination at the end of each year as under :

First Year : Three theory papers and two practicals ;

Second Year : Two theory papers, one practical and one thesis.

The minimum for a pass is 50 per cent. of the aggregate marks and not less than 40 per cent. in each paper. Candidates obtaining 60 per cent. of the aggregate marks and getting the prescribed minimum of 40 per cent in each paper shall be declared to have passed in the First Class.

M.Litt., M.Sc., Ph.D., D.Litt., & D.Sc. Degree (By Research)

All these degrees are awarded on the basis of research theses to Bachelors of Arts or Science (Honours) or Masters of Letters or Masters of Science after the completion of an approved course of special study and research at this University under the guidance of a Professor of this University or other person appointed by the Syndicate for a specified period.

M.Litt. and M.Sc. Degrees. It is open to B.A. (Hons.), B.Sc. (Hons.), M.A., and B.O.L., B.E. and B.E. (Chem.) graduates. The thesis is to be submitted after an approved course of study and research for a period of one year except in the case of B.O.L. graduates and in the case of B.E. graduates of other Universities, who should submit the thesis after study for two years. B.O.L. degree holders should also pass in two of the papers prescribed for the B.A. (Hons.) Degree examination, in the language studied.

The Ph.D. Degree is open to M.Litt. and M.Sc. Degree holders (by research). Teachers of not less than 5 years standing and non-teachers of seven years standing who hold the basic Honours degree, M.A. Degree B.E., B.E. (Chem.), B.Sc. (Ag.) or B.O.L. (Hons.) Degree are also eligible to register for the Degree. The thesis is to be submitted after special study and research for a period of two years.

The D.Sc. Degree is open to Ph.D. and M.Sc. Degree holders. The thesis is to be submitted after a period of one year or two years respectively at the end of an approved course of study and research either at the University or elsewhere.

The D.Litt. Degree is on the lines of the D.Sc. Degree open to Ph.D. and M.Litt. degree holders.

ORIENTAL TITLES

The B.O.L. Degree is awarded at the successful completion of a course of study and an examination, two years after the Intermediate. An S.S.L.C. holder with not less than 35 per cent. marks in English eligible for admission to a course of study in the Oriental Faculty will have to put in an additional course of two years and pass the Intermediate B.O.L. consisting of Part I-English and Part II which is identical with Pulavar or Vidwan Preliminary Examination. The final B.O.L. course of study and examination consists of three parts, Part I-English, Part II-Linguistics with special reference to Tamil or Sanskrit and Part III which is identical with final examination for Pulavar or Vidwan or Siromani.

The M.O.L. Degree (by research) is open to Vidwan or Siromani Title holders of this University who have also taken the Certificate of Proficiency in any two of the subjects prescribed for the Certificate. The thesis should be submitted after a two years' course commencing from the date of passing the Certificate of Proficiency Examination.

The M.O.L. Degree (by Examination), is open to candidates who have passed the B.O.L. Degree Examination in Tamil of this University

or an examination recognised as equivalent thereto. The course extends over a period of one year. The examination consists of four papers and a *viva voce* test. Minimum for a pass is 40 per cent. of total marks and 30 per cent. in each of the four papers. Candidates obtaining not less than 60 per cent. of the total will be placed in the first class and those obtaining not less than 50 per cent will be placed in the Second Class. The rest will be placed in the Third class.

The Siromani Titles in (i) Vedanta, (ii) Mimamsa, (iii) Vyakarana, (iv) Sahitya and (v) Nyaya and Vidwan Title with Tamil (Main) and Sanskrit (Subsidiary) and Pulavar Title with Tamil alone, are awarded after the successful completion of a four years' course leading to a Preliminary Examination at the end of the second year and a final Examination at the end of the fourth year.

Certificate of Proficiency in Oriental Learning: The Examination is to be taken two years after passing the Preliminary Examination for titles.

Sangitha Bushana Title: It is a course of four years leading to a Preliminary Examination at the end of the second year and a Final Examination at the end of the fourth year.

The Tamil Music Certificate is awarded after a year's course open to Sangitha Bushana Title holders and others who have special aptitude in Music.

ENGINEERING AND TECHNOLOGY

Instruction is offered in the following courses of study (i) B.E. Degree course (ii) B.E. (Chem.) Degree course.

The Engineering degree course extends over a period of four years after Intermediate Science, leading to the award of the degree in the following branches (a) Civil (b) Mechanical and (c) Electrical Engineering. The course in Chemical Engineering for B.E. (Chem.) Degree is also of four years' duration after Intermediate Science. The minimum for a pass for the Examinations during the 1st and 2nd years is 30 per cent in each subject and 40 per cent in the aggregate and for the examinations in the 3rd and 4th year, 40 per cent in each subject and 50 per cent in the aggregate. There is provision for exemption from re-appearance at an examination in a subject in which not less than 50 per cent of the marks have been secured. There is a University Examination at the end of each year of the course.

Post-Graduate Study and Research

There is a Post-Graduate Council consisting of the Vice-Chancellor and the Heads of Departments of Study in the University to direct and control Post-Graduate Studies and Research and make recommenda-

tions thereon to the Syndicate. At present there is provision for instruction in the following subjects leading to the award of M.Litt, M.Sc., Ph.D., D.Sc., and D.Litt. degrees by research.

By Research

(1) English, (2) Philosophy, (3) History, (4) Economics, (5) Tamil, (6) Sanskrit, (7) Mathematics, (8) Physics, (9) Chemistry, (10) Botany (11) Zoology, (12) Agriculture, and (13) Engineering (Structural Engineering, Public Health Engineering, and Agricultural Engineering).

With financial grants sanctioned by the Government of India additional research training facilities in science subjects have been provided in the Departments of Physics, Chemistry, Botany and Zoology. Besides 18 research scholarships are allotted to the Departments of Mathematics, Physics, Chemistry, Botany, Zoology, Agriculture, Statistics, Engineering and Technology to work under the guidance of the Professors concerned on specific problems assigned to each scholar and approved by the Government of India.

NATIONAL CADET CORPS

With the sanction of the Government of India 2 units of the National Cadet Corps (Senior Division) with a strength of 5 Officers and 154 cadets for the Infantry Unit and 2 Officers and 60 cadets for the Signal Unit were formed in the Academic year 1949-50. The University has sanctioned a contribution of Rs. 1,600 towards the provision of amenities to the N.C.C. Units.

Finance

FINANCIAL STATEMENT — 1954-55.

RECEIPTS

Fee receipts	..	Rs. 2,89,496
Interest from endowments	..	Rs. 2,27,028
Government Grant	..	Rs. 8,37,000
Total		.. <hr/> Rs. 13,53,524 <hr/>

CHARGES RECURRING.

1. Salaries of teaching staff	..	Rs. 6,03,237
2. Salaries of Admn. Staff & Lower Staff	..	Rs. 2,80,485
3. Equipment, apparatus and appliances	..	Rs. 2,36,671
4. Contingencies and consumable stores	..	Rs. 79,007
5. Research expenses	..	Rs. 24,246
6. Examination expenses	..	Rs. 78,252
7. Athletics & Games	..	Rs. 7,290
8. Library	..	Rs. 57,186
		<hr/>
Total	..	Rs. 13,66,374
		<hr/>

BANARAS HINDU UNIVERSITY

Introductory : Character of the University

The objects of the Banaras Hindu University, which is a teaching and residential University, are :—

- (i) to promote the study of the Hindu Shastras and of Sanskrit literature generally as a means of preserving and popularising for the benefit of the Hindus in particular and of the world at large in general, the best thought and culture of the Hindus, and all that was good and great in the ancient civilization of India ;
- (ii) to promote learning and research generally in arts and science in all branches ;
- (iii) to advance and diffuse such scientific, technical and professional knowledge, combined with the necessary practical training, as it best calculated to help in promoting indigenous industries and in developing the material resources of the country ; and
- (iv) to promote the building up of character in youth by making religion and ethics an integral part of education.

The University is an All-India institution and is open to persons of all castes and creeds, and so are its free studentships, stipends, general scholarships of merit and fellowships. The University was incorporated in 1915 and as there was already a fully equipped College in existence, the Central Hindu College, Banaras, the work of the University began in 1916. The University has since been removed to a magnificent site of 1,300 acres in which have been laid out the various buildings.

The University at present consists of fourteen constituent Colleges :

- (1) Sanskrit Mahavidyalaya
- (2) Central Hindu College
- (3) Central Hindu College (Kamachha Section)
- (4) Women's College
- (5) Teachers' Training College
- (6) College of Science
- (7) College of Technology
- (8) Engineering College
- (9) College of Mining and Metallurgy
- (10) College of Agriculture
- (11) Law College
- (12) College of Ayurveda

- (13) College of Indology
- (14) College of Music and Fine Arts.

In addition to those, there are five affiliated local Colleges, namely :

- (1) D. A. V. College,
- (2) Besant College,
- (3) Vasanta College for Women,
- (4) Harish Chandra College,
- (5) Udai Pratap College.

Besides these institutions, the University has a School Board which looks after the management of its three schools :

- (1) Central Hindu School for boys,
- (2) Central Hindu School for girls,
- (3) Ranvir Sanskrit Pathasala.

The first two prepare students for the Admission Examination and the third for the Praveshika Examination of the University.

The Central Hindu College (Kamachha Section), the Besant College, the D. A. V. College, the Vasanta College for Women, the Harish Chandra College, the Udai Pratap College and the three schools are situated within the municipal limits of Banaras. The remaining institutions are on the University campus outside the city of Banaras.

Constitution of the University

The authorities of the University are

- (1) The Court which is the supreme Governing Body ;
- (2) The Executive Council which is the Executive body of the Court ;
- (3) The Academic Council which is the supreme Academic body of the University ;
- (4) The Standing Committee which is the Executive body of the Academic Council ;
- (5) The Finance Committee ;
- (6) The Faculties.

The Faculties of the University are

- (1) Oriental Learning ;
- (2) Theology ;
- (3) Arts ;
- (4) Science ;
- (5) Technology ;
- (6) Law ;
- (7) Ayurveda (Medicine and Surgery) ;
- (8) Music and Fine Arts.

Officers and Staff of the University

Visitor

The President of India, (Dr. Rajendra Prasad).

Chief Rector

The Governor of the State of Uttar Pradesh, (Shri K. M. Munshi).

Chancellor

Lieut.-General His Highness Maharaja Sir George Jayaji Rao Surendra Bahadur, G C.S.I., G.C.I E., of Gwalior, Rajpramukh of Madhya Bharat, Gwalior.

Pro-Chancellor

Maharajadhiraj Dr. Sir Kameshwar Singh Bahadur, K C.S.I., D.Litt. of Dharbhanga.

Vice-Chancellor

Dr. C. P. Ramaswami Aiyar, K C.I E., K.C S.I., LL.D.

Pro-Vice-Chancellor

Shri M. C. Bijawat, B.Sc. (Hons), B.E. (Hons.), M.I.E.

Treasurer

Sri Jyoti Bhushan Gupta.

Registrar (Acting)

Major S. L. Dar, M A., LL.B.

Provost

Prof. M. Sen Gupta, B.Sc. (Cal.), B Sc. (Hons.) (Glasgow), A.M.I E E., C.P.E., Inst. P. (India).

Chief Proctor

Shri S. C. Das Gupta, M.A.

Librarian

Shri D. Subramaniam, M.A.

Deans

Oriental Learning	..	Pt. Lakshmi Nath Jha.
Theology	..	Pt. Vishwanath Shastri.
Arts	..	Dr. R. S. Tripathi, Ph.D. (Lond.)

Science	.. Dr. S. S. Joshi, D.Sc. (Lond.).
Technology	.. Prof. B. M. Singh, B.Sc. (Eng.), M.I.E. (Ind.), A.M.I.Mech.
Law	.. Prof. G. B. Joshi, M.A., LL.M. (Bom.) M.L. (Cal).
Ayurveda (Medicine and Surgery)	.. Dr. M. S. Verma, M.B.B.S.
Music and Fine Arts	.. Shri Omkar Nath Thakur.

Sanskrit Mahavidyalaya

Director of Sanskrit Research, Pt. Ram Chandra Dikshit.

Principal, Pt. Mahadeo Sharma Pandey.

Pradhan Adhyapak

Pt. Raja Ram Pandey, Vyakaran.
Pt. Lakshmi Nath Jha, Nyaya.
Pt. Mahadeo Sharma Pandeya, Sahitya.
Pt. Ram Vyas Pande, Jyotish.
Pt. Ram Chandra Dikshit, Vedanta.
Pt. Vishwanath Shastri, Dharma Shastra.
Pt. Hira Ballabh Shastri, Sankhya Yoga
Adhyapaks — 27.

Central Hindu College

Principal: Prof. R. S. Tripathi, M.A., Ph D. (London).

Professors :

Dr. C. N. Menon, M.A., Ph.D., D.Litt. — English.
Prof. Raj Bali Pande, M.A., D.Litt. — Ancient Indian History and Culture.
Prof. A. K. Das Gupta, Ph D. — Economics.
Rao Bahadur K. V. Rangaswami Aiyangar, M.A. — Economics (Honorary)
Dr. Syama Charan De, M.A., D.Litt. — Mathematics (Honorary).
Prof. V. V. Narlikar, M.A. (Cantab.), — Mathematics.
Prof. S. K. Maitra, M.A., Ph D. (London) — Philosophy (Honorary).
Prof. R. S. Tripathi, M.A., Ph.D. (London) — History.
Prof. Mukut Behari Lal, M.A. — Politics.
Prof. B. L. Atreya, M.A., LL.B., D.Litt. — Philosophy.
Hazari Prasad Dwivedi, D.Litt. — Hindi.
Shri Raman Lal Agarwal, M.A. (Acting) — Commerce.
Dr. Surya Kant, M.A., Ph.D., D.Phil. — Sanskrit.

Readers :

Shri Baldeo Upadhyaya, M.A. — Sanskrit.
Shri Brij Mohan, M.A., LL.B., Ph.D. (Liverpool) — Mathematics.
Shri S. C. Das Gupta, M.A. — Mathematics.
Shri Jugal Kishore, M.A. — Mathematics.

Shri R. A. Dwivedi, M.A., D.Litt. — English.
 Shri J. L. Mehta, M.A. — Psychology.
 Dr. C. D. Sharma, D.Phil., D Litt., (Acting) — Philosophy.
 Shri B. L. Sahaney, M.A. — English.
 Shri M. M. Desai, M.A. — English.
 Shri S. L. Dar, M.A., LL.B. — Philosophy.
 Shri S. Jalota, M.A., Ph.D. — Philosophy.
 Dr. Debi Prasad Mittra, M.D. (Harvard), L M.S. — Psychology.
 Shri K. Bhattacharya, M.A. — History.
 Shri Awadh Behari Pandey, M.A., D.Phil. (Allahabad) — History.
 Shri Pran Nath, D.Sc. (Lond.) — Indo-Sumerian Studies.
 Shri Raman Lal Agrawal, M.A. — Commerce.
 Dr. Jagannath Prasad Sharma, M.A., D.Litt. — Hindi.
 Pandit Vishwanath Prasad Mishra, M A. — Hindi.
 Vacant — Bengali.
 Lecturers — 65.
 Fellows — 6.
 Instructors — 2.

College of Indology

Principal: Dr. Raj Bali Pande, M A., D Litt. (Acting).

Professors :

Dr. Raj Bali Pande, M.A., D Litt. — Indian History & Culture.
 T. R. V. Murti, M.A., D.Litt. — Sanskrit.
 Dr. Surya Kant, M A., Ph.D., D Phil. — Language and Literature.

Reader :

Dr. V. S. Agrawala, M A., Ph.D., D Litt. — Art and Architecture.

Lecturers — 5.

Research Fellows — 6.

Women's College

Principal: Mrs. K. Venkateshwaran, M.A.

Lecturers — 25.

Tutors — 5.

Teachers' Training College

Principal: Dr. P. N. Rozdon, B.A., Ph.D. (Edin.).

Prof.: Dr. P. N. Rozdon, B.A., Ph.D. (Edin.).

Reader: Miss Sarojini Varshney, M.A., M.Ed., Dip.Ch. (Lond.).

Lecturers — 12.

Instructors — 4.

College of Science

Principal : Prof. S. S. Joshi, D.Sc. (London).

Professors :

S. S. Joshi, D.Sc. (London) — Chemistry.

A. B. Misra, D.Sc., D.Phil. (Oxon.) — Zoology.

B. Dasannacharya, M.A., D.Phil. (Munich) — Physics.

R. K. Asundi, M.Sc., Ph.D. (Lond.), E.A.Sc., E.N.I. — Physics.

Raj Nath, M.Sc., Ph.D. (London), D.I.C. (London), F.N.I. — Geology.

C. V. Raman, Kt. D.Sc., F.R.S., N.I. — Physics (Hony.).

N. C. Nag, M.A., F.I.C. — Chemistry (Hony.).

Dr. B. K. Singh, Sc.D. (Cantab.) — Agri. Chemistry (Hony.).

Dr. Ram Lochan Singh, M.A., Ph.D. — Geography.

V. S. Dubey, Ph.D. (Lond.), D.I.C. — Economic Geology (Hony.).

Dr. P. Parija, M.A. (Cantab.), O.B.E., D.Sc., F.N.I., I.E.S. — Botany (Hony.).

Dr R. D. Misra, F.N.I. — Botany.

Readers :

Shri S. R. Khastgir, M.Sc. (Cal.), Ph.D., D.Sc. (Edin.), M.I.R.E. (New York), F.N.I. — Physics.

Dr. R. Y. Roy, M.Sc., Ph.D. — Botany.

Dr. B. Dayal, M.Sc. — Physics.

Dr. K. R. Mehta, M.Sc., Ph.D. — Botany.

Dr. Ram Nagina Singh, M.Sc., D.Sc. — Botany.

Major Chandra Bal, M.Sc. — Zoology.

Dr. Sarju Prasad, M.A., M.Sc., D.Sc. — Chemistry.

Shri D. K. Chakravarti, M.Sc. — Geology (Petrology).

Lecturers — 68.

College of Technology

Principal : Dr. Gopal Tripathi, M.Sc., M.Sc. (Michigan), D.Sc.

Professor : Dr. Gopal Tripathi, M.Sc. M.Sc. (Michigan), D.Sc. — Chemical Engg.

Readers :

Dr. R. Charan, B.Sc. (Sheffield), Dip. Glass Tech. (Sheff.),
A.M.Tech.I. (Gt. Brit.), D.Sc. (Prague Glass Tech.).

Shri H. N. Roy, Hon. Ceramic Dip. Ceramic Engineer (U.S.A.) —
Ceramics.

Shi N. K. Basu, M.Sc. — Pharmaceutical Chemistry.

Dr. Sankatha Prasad, Ph.D., D.Sc. — Pharmaceutical Chemistry.

Lecturers — 28.

Tutors — 2.

Research Fellows — 2.

Engineering College

Principal: Prof. M. Sen Gupta, B.Sc. (Cal.), B.Sc. (Hons.) (Glasgow), A.M.I.E.E., C.P.E., F. Inst.P. (India).

Professors :

M. Sen Gupta, B.Sc. (Cal.), B.Sc. (Hons.) (Glasgow), A.M.I.E.E., C.P.E., F.Inst.P. (India) — Electrical Engineering.

B. M. Singh, B.Sc. (Eng.), M.I.E. (Ind.), A.M.I. Mech. E. — Mechanical Engineering.

S. S. Gairola, B.Sc. (Eng.), M.S. in C.E. (Tenn.), A.M.A.S.C.E., M.A.C.U., M.I.N.N.S., F.E.M.I.E. — Mech. Engineering.

Readers :

Shri V. P. Pandey, B.Sc. (Eng.), A.M.I.E. (India) — Civil Engg.

Shri B. D. Kelkar, B.E. (Eng.), M.I.E. (Ind.), A.S.M.E. — Mechanical Engineering.

Shri C. C. Chakravarty, B.Sc. (Eng.), M.I.E. — Mechanical Engineering.

Shri V. M. Rane, B.Sc. (Eng.), A.M.I.E. — Economics.

Shri Pran Nath, M.Sc., D.I. (Lond.), D.Sc., F.S.S. (Paris) — Engg. Mathematics.

Shri Shankar Lal, B.Sc. (Eng.), M.Sc. (Eng.) (Lond.), D.I.I.Sc. — Mechanical Engineering.

Shri P. C. Dutt, B.Sc. (Eng.), M.I.E. (Ind.) — Electrical Engg.

Shri M. C. Pande, B.Sc. (Eng.), A.M.I.E. (Ind.) — Electrical Engg. (on Leave).

Lecturers — 25.

Tutor — 1.

College of Mining and Metallurgy

Principal: Prof. Daya Swarup, Ph.D. (Sheffield), M.I.M., M.I.S.I.

Professors :

Daya Swarup, Ph.D. (Sheffield), M.I.M., M.I.S.I. — Metallurgy.

M. P. Natarwala, B.Sc. (Mining), M.Sc. (Geol.), M.E.M. (Colo. U.S.A.), Sc.D. (M.I.T.) — Mining.

Readers :

Dr. P. L. Agrawal — Assaying.

Shri U. V. Bhat, B.Sc. (Met.), Ph.D. (Sheffield) — Metallurgy.

Shri D. Bhattacharya — Mine Surveying.

Lecturers — 19.

College of Agriculture

Principal: Dr. Jaswant Singh, Ph.D. (Wales).

Professors :

Dr. Jaswant Singh, Ph.D. (Wales).

Readers :

Dr. R. S. Choudhury, M.Sc., Ph.D. (Carnoll), (U.S.A.), D.Sc. — Agri.
Bot. (Phiologist).

Dr. Sant Singh — Agri. Chemistry.

Dr. Akshaiber Lal, M.Sc., Ph.D. (Lond.) — Plant Pathology.

Dr. K. D. Baweja, M.Sc., Ph.D. (Lond.) — F.E.S.I. — Entomology (Hony.),

Lecturers — 15.

Instructor — 1.

Law College

Principal: Prof. G. B. Joshi, M.A., M.L., LL.M.

Professor: G. B. Joshi, M.A., LL.M. (Bom.), M.L. (Cal.).

Reader: Shri V. V. Deshpande, LL.M. (Bom.).

Lecturers — 2.

College of Ayurveda

Principal: Dr. M. S. Verma, M.B.B.S. (Acting).

Professor: Pt. Satya Narain Shastri — Ayurveda & Medicine (Hony.).

Readers :

Pt. Rajeswar Dutt Shastri — Ayurvedic Medicine.

Dr. G. P. Das Gupta, M.B. — Medicine.

Lecturers — 12.

Tutors and Demonstrators — 8.

Central Hindu College (Kamachha Section)

Principal: (Acting): Shri B. N. Mazumdar, M.Sc.

Lecturers — 44.

Part-time Lecturer (Research students) — 7.

Instructors — 2.

College of Music and Fine Arts

Principal: Sangit Marthand Pt. Omkar Nath Thakur.

Lecturers — 2.

Instructors — 6.

Number of Students (1953-54)

The total number of students on the rolls of the University on 31st March, 1954, was 8,614 out of which 486 were girl students. The number of students residing in Hostels was 2,942, Approved Lodges 466, and Day Scholars 5,206. The distribution of students in the various institutions and courses is shown in the statement given below:

Number of
students in
the Colleges.

1. College of Sanskrit Mahavidyalaya	..	369
2. Central Hindu College	..	2,807
3. College of Science	..	1,157
4. College of Technology	..	343
5. Engineering College	..	554
6. Teachers' Training College	..	132
7. College of Mining and Metallurgy	..	194
8. College of Agriculture	..	214
9. Law College	..	434
10. College of Ayurveda	..	493
11. Women's College	..	325
12. College of Music and Fine Arts	..	119
13. Central Hindu College (Kamachha Section)	..	1,393
14. College of Indology	..	80
Total		.. 8,614

Number of students in affiliated colleges :

Number

1. Harish Chandra College	..	283
2. Udai Pratap College	..	361
3. D. A. V. College	..	461
4. Besant College, Raj Ghat	..	83
5. Vasanta College for Women	..	64
Total		.. 1,252

Number of students in schools affiliated to the University :

1. Central Hindu Boys' School	..	832
2. Central Hindu Girls' School	..	1,068
3. Ranbir Sanskrit Pathshala	..	169
Total		.. 2,069

EXAMINATION RESULTS OF 1953

Name of the Examination	No. appeared	No. passed	Percentage of passes
Admission	1339	637	47.5%
I.A.	434	257	59.2%
B.A.	1009	659	65.3%
M.A. (Previous)			
Geography	28	27	96.4%
Philosophy	11	7	63.6%
Psychology	52	44	84.6%
Politics	76	62	81.6%
Hindi	64	61	95.3%
Pali	2	2	100%
Sanskrit	10	10	100%
Mathematics	23	16	69.6%
English	56	40	71.4%
Ancient Indian History & Culture	4	4	100%
Economics	66	53	80.3%
History	86	75	87.2%
M.A. (Final)			
Sanskrit	30	27	90.0%
English	52	32	61.5%
Hindi	110	101	91.8%
Philosophy	26	21	80.7%
Psychology	49	46	93.8%
History	37	34	91.9%
Ancient Indian History & Culture	4	3	75.0%
Politics	54	46	85.1%
Economics	97	74	76.2%
Mathematics	19	14	73.6%
Geography	12	12	100%
I.Sc.	588	389	66.2%
B.Sc.	531	307	57.8%
M.Sc. (Previous)			
Chemistry	22	21	95.5%
Mathematics	47	32	68.1%
Botany	8	8	100%
Geography	2	2	100%
Geophysics	4	4	100%
Geology	14	14	100%
Zoology	17	17	100%
Physics	20	19	95%
Spectroscopy	7	5	71.4%
M.Sc. (Final)			
Geography	13	12	92.3%

Name of the Examination	No. appeared	No. passed	Percentage of passes
Mathematics	27	19	70.3%
Physics	40	37	92.5%
Geology	29	28	96.5%
Botany	8	8	100%
Chemistry	32	29	90.6%
Geo-Physics	5	5	100%
Zoology	11	11	100%
I.Com.	217	143	65.9%
B.Com.	275	222	80.7%
M.Com. (Previous)	72	61	84.7%
M.Com. (Final)	43	43	100%
B.Ed. (Theory)	114	110	96.5%
B.Ed. (Practical)	113	113	100%
M.Ed.	12	12	100%
LL.B. (Previous)	281	197	70.1%
LL.B. (Final)	184	104	56.5%
LL.M.	3	—	—
I.Sc. (Eng.) Part I	149	122	81.9%
I.Sc. (Eng.) Part II	139	129	92.8%
B.Sc. (Elec. Eng.) Part I	66	62	93.9%
B.Sc. (Mech. Eng.) Part I	56	48	85.7%
B.Sc. (Civil Eng.) Part I	25	24	96.0%
B.Sc. (Eng.) Part II (Elec.)	52	52	100%
B.Sc. (Eng.) Part II (Mech.)	47	45	95.7%
B.Sc. (Eng.) Part II (Civil)	25	24	96.0%
1st. Yr. Min. Met. & Fuel Tech.	49	41	83.7%
2nd Yr. (Mining)	19	16	84.2%
2nd Yr. (Met. & Fuel Tech.)	31	30	96.8%
B.Sc. (Mining)	18	17	94.4%
B.Sc. (Metallurgy)	23	21	91.3%
B.Sc. (Fuel Tech.)	4	4	100%
B.Sc. (Glass & Cer.) Part I	13	9	69.2%
B.Sc. (Glass & Cer.) Part II	10	9	90.0%
B.Sc. (Glass)	8	8	100%
M.Sc. (Glass)	3	3	100%
B.Sc. (Cer.)	3	3	100%
M.Sc. (Cer.)	3	3	100%
B.Pharm. 1st Yr.	19	19	100%
B.Pharm. 2nd Yr.	19	19	100%
B.Pharm. 3rd Yr.	15	13	86.6%
M.Pharm.	6	6	100%
B.Sc. Tech. (Ind. Chem.)	51	50	98.9%
M.Sc. Tech. (Ind. Chem.) Prev.	11	10	90.0%
M.Sc. Tech. (Ind. Chem.) Final	12	12	100%

Name of the Examination	No. appeared	No. passed	Percentage of passes
B.Sc. (Chem. Eng.) Part I	31	24	77.4%
B.Sc. (Chem. Eng.) Part II	34	29	85.3%
B.Sc. (Chem. Eng.) Part III	29	28	96.5%
B.Sc. (Chem. Eng.) Part IV	12	12	92.3%
B.Sc. (Ag.) Part I	35	34	97.1%
B.Sc. (Ag.) Part II	49	48	97.9%
B.Sc. (Ag.) Part III	44	44	100%
M.Sc. (Ag.)	30	30	100%
Ayurveda Praveshika	66	49	74.2%
1st Prof. Ayurveda	47	32	68.1%
2nd Prof. Ayurveda	85	73	85.9%
3rd Prof. Ayurveda Part A	38	21	55.3%
3rd Prof. Ayurveda Part B	47	34	72.3%
Praveshika in Sanskrit	14	8	57.1%
Madhyama Part I	25	16	64.0%
Madhyama Part II	14	11	78.6%
Madhyama Part III	12	11	91.6%
Paurohitya Ratna Pt. I (New)	9	9	100%
Paurohitya Ratna Pt. I (Old)	2	2	100%
Dip. in Paurohitya Ratna	2	1	50%
Karma Kand Shastri Part I	1	1	100%
Shastri Part I (New)	37	32	86.5%
Shastri Part II (Old)	2	1	50.0%
Shastri Part II (New)	26	23	88.5%
Shastri Part II (Old)	1	1	100%
Shastri Part III	24	23	95.9%
Shastri Parts I & II	1	1	100%
Shastri Sampurna	2	1	50%
Acharya Part I	27	14	51.8%
Acharya Part II	12	10	83.3%
Acharya Part III	11	11	100%
Sangit Praveshika Theory	13	13	100%
Sangit Praveshika Practice	13	13	100%
Sangit Madhyama Theory	6	6	100%
Sangit Madhyama Practice	6	6	100%
Diploma in Junior Sculpture	2	2	100%
Diploma in Junior Painting	2	2	100%
Diploma in Senior Painting	3	1	33.3%
Diploma in Library Science	16	14	85.5%
Diploma in Soap	1	1	100%
Diploma in German	8	8	100%
Diploma in Chinese	1	1	100%
Diploma in Clinical Psychology	3	3	100%
Certificate in Hindi	1	1	100%

Name of the Examination	No. appeared	No. passed	Percentage of passes
Certificate in Statistical Method	46	46	86.9%
Ph.D.	13	7	53.8%

*Statistics of the results of the Supplementary
Examinations of 1953*

Admission	37	32	86.5%
I.A.	6	6	100%
I.Sc.	6	5	83.3%
I.Com.	1	1	100%
B.A.	35	24	68.5%
B.Sc.	15	11	73.3%
B.Com.	5	4	80.0%
A.M.S.	10	8	80.0%

*List of members appointed on the Teaching Staff of the University
during the year 1953-54*

1. Shri G. K. Krishnamurthy, Lecturer in Civil Engineering College.
2. Shri B. C. Mathur, Lecturer in Chemical Engineering, College of Technology.
3. Shri Shanti Swarup Mathur, Lecturer in Chemistry, C.H.C. (Kamachha).
4. Shri Krishna Chandra Tripathi, Lecturer in Chemistry, C.H.C. (Kamachha).
5. Shri K. N. Mehrotra, Lecturer in Chemistry, C.H.C. (Kamachha).
6. Shri Krishna Sastri Makate, Adhyapak in Vyakaran, Sanskrit Mahavidyalaya.
7. Shri Gopal Chandra Misra, Adhyapak in Yajurveda, Sanskrit Mahavidyalaya.
8. Shri Radhey Shyam Pandey, (Part time), Adhyapak in Rigveda, Sanskrit Mahavidyalaya.
9. Dr. S. O. Shukla, (Temp.) Lecturer in Chemical Engineering, College of Technology.
10. Shri Prakash Narain Mehrotra, (Temp.) Lecturer in Zoology in Science College.
11. Mrs. Krishna Tewari, (Temp.) Lecturer in Mathematics, Women's College.
12. Dr. Padma Agrawal, (Temp.) Lecturer in Philosophy, Women's College.
13. Mrs. R. Chaudhary, Lecturer in Civics-cum-Politics, Women's College.
14. Shri G. D. Pandey, (Temp.) Lecturer in Chemistry, C.H.C. (Kamachha).

15. Shri P. N. Suwal, (Temp.) Lecturer in Chemistry, C.H.C. (Kamachha).
16. Shri K. P. Acharya, (Temp.) Lecturer in Chemistry, C.H.C. (Kamachha).
17. Mrs. Kashiwali, (Temp.) Lecturer in Physics and Chemistry, Women's College.
18. Shri S. N. Mathur, (Temp.) Lecturer in Chemistry, Science College.
19. Shri Ram Shankar Singh, Lecturer in Plant Pathology, Agriculture College.
20. Shri S. Bhattacharya, Lecturer in English, C.H.C. (Kamachha).
21. Shri Raj Kishore Pandey, (Temp.) Lecturer in Commerce, C.H.C. (Kamachha).
22. Shri B. S. Mahanty, Lecturer in Spectroscopy, Science College.
23. Shri S. K. Dikshit, (Temp.) Lecturer in Mining and Metallurgy.
24. Shri K. P. Srivastava, (Temp.) Lecturer in Chemistry, Science College.
25. Shri Ranbir Singh, (Temp.) Lecturer in Organic Chemistry, Science College.
26. Shri Ashwini Kumar Sah, (Temp.) Lecturer in Commerce, C.H.C. (Kamachha).
27. Shri Ram Awadh Singh, (Temp.) Lecturer in Economics, C.H.C. (Kamachha).
28. Shri Narbadeshwar Prasad, (Temp.) Lecturer in Geography, Science College.
29. Shri Shushil Madhav Pathak, (Temp.) Lecturer in History, C.H.C. (Kamachha).
30. Shri C. Keshav Rao, (Temp.) Lecturer in English, C.H.C. (Kamachha).
31. Shri V. R. Radhakrishnan, (Temp.) Lecturer in Mining and Metallurgy, College of Metallurgy.
32. Shri N. M. Misra, (Temp.) Lecturer in Agricultural College.
33. Shri N. N. Srivastava, (Temp.) Lecturer in Agricultural Engineering, Agriculture College.
34. Shri Sarat Sarkar, (Temp.) Lecturer in Botany, Science College.
35. Shri Satya Narain Rath, (Temp.) Lecturer in Politics, C.H.C.
36. Shri Radha Kant Narihar Saran, (Temp.) Lecturer in Politics, Science College.
37. Shri Ashok Chakravorty, (Temp.) Lecturer in Mechanical Engineering, Engineering College.
38. Shri R. C. Singhal, (Temp.) Lecturer in Mechanical Engineering, Engineering College.
39. Shri Ramadhar Singh, (Temp.) Lecturer in Electrical Engineering, Engineering College.
40. Shri Vinode Narain Singh, (Temp.) Lecturer in English, C.H.C.
41. Shri B. K. Singh, (Temp.) Lecturer in Economics, C.H.C. (Kamachha).
42. Shri P. H. Parvatikar, (Temp.) Lecturer in Economics, C.H.C.

43. Shri Ganesh Prasad Srivastava, (Temp.) Lecturer in Teachers' Training College.
44. Shri Ram Chandra Shukla, (Temp.) Lecturer in Teachers' Training College.
45. Shri Ram Sunder Lal, (Temp.) Lecturer in Teachers' Training College.
46. Shri Shyam Kant Shukla, (Temp.) Lecturer in Chemistry, Science College.
47. Shri S. R. Khanna, (Temp.) Lecturer in Glass Technology.
48. Shri Jang Bahadur Singh, (Temp.) Lecturer in Electrical Engineering, Engineering College.
49. Shri A. K. Dutta Gupta, Lecturer in Law, Law College.
50. Shri V. P. Tiwari, (Temp.) Lecturer in Mycology, Science College.
51. Shri S. D. Desai, (Temp.) Lecturer in Geophysics, Science College.
52. Shri V. D. Shukla, (Temp.) Lecturer in Geophysics, Science College.
53. Shri K. K. Singh, (Temp.) Lecturer in Geophysics, Science College.
54. Shri Prafulla Kumar, (Temp.) Lecturer in Geophysics, Science College.
55. Shri Lajpat Ram, (Temp.) Lecturer in Spectroscopy, Science College.
56. Dr. Mandoneca, Hony. Lecturer in Midwifery and Gynaecology, Ayurvedic College.
57. Shri Kaladhar Tripathi, (Temp.) Adhyapak, Sanskrit Mahavidyalaya.
58. Shri Ram Hari Lal Agrawal, (Temp.) Lecturer in Electrical Engineering, Engineering College.
59. Shri F. M. Kabinnewar, (Temp.) Lecturer in Chemistry, Science College.
60. Shri Shiva Ram, (Part time) Lecturer in English, C.H.C. (Kamachha).
61. Shri Birendra Singh, (Temp.) Lecturer in Chemical Engineering, College of Technology.
62. Shri G. S. Tewari, (Temp.) Lecturer in Chemical Engineering, College of Technology.

Free Studentships, Scholarships and Medals

No fees are charged from the students of the Colleges of Oriental learning and Theology; ten per cent of the total number of students are exempted from the payment of tuition fees in the Central Hindu College, Women's College, Teachers' Training College, College of Science and the College of Ayurveda, three per cent in Commerce, five per cent of students in the College of Technology of Mining and Metallurgy, College of Agricultural Research and Law College and two per cent of students in the Engineering College.

In addition to these University free studentships, there are nearly 54 different kinds of scholarships given out of different donations and endowments. These scholarships are generally awarded yearly on con-

sideration of poverty and merit, according to conditions laid down by the donors and approved by the University. Further, the Central Government and the State Government also give some financial help to students of backward classes, scheduled castes and Momin and Ansari communities in the form of scholarships. Besides these community scholarships, both the Governments give some financial help to refugee students and sufferers of 1942 in the form of loans

More than a thousand students are given scholarships, Fellowships and other financial help from the University Fund, by the Provincial and Central Governments and by the Harijan Sahayak Sangh of Uttar Pradesh.

There are nearly 10 Research scholarships given to Research students of Sanskrit and Hindi.

In addition to a number of endowed scholarships under the management of the University, the University has made provision for awarding scholarships in the Faculty of Oriental Learning and Theology and for awarding merit scholarships to the first two students at each examination.

U.P. Government Scholarships for the Teachers' Training College

Sixty scholarships of Rs. 20 each per mensem are awarded each year, out of which 10 scholarships are given to M.Ed. students and 50 to B.Ed. students.

Scholarships for Women Students

Twenty-six Birla scholarships, each of the monthly value of Rs. 15, and four each of the monthly value of Rs. 10 and, Rajarshi scholarships of the monthly value of Rs. 10 besides number of others are awarded to the women students studying in the University.

Laboratories, Gardens and Farms

Laboratories in the following subjects are fully equipped: Chemistry, Physics, Botany, Zoology, Geology, Spectroscopy, Industrial Chemistry, Ceramics, Glass Technology, Pharmaceutics, Mechanical and Electrical Engineering, Mining, Metallurgy and Fuel Technology and Agriculture.

An extensive Botanical garden, an Ayurvedic garden and Agricultural farms are maintained for the study of plants, herbs and crops.

Library

The total number of books in the Library which to a large extent has been created by requests, special donations, and Government and University grants, is over Rs. 2,00,000. The Library is housed in the

Sayaji Rao Gaikwad Library for which the Maharajah of Baroda donated two lakhs of rupees. The books are classified according to the Dewey Decimal Classification Scheme and there is an up-to-date Card Catalogue of the Dictionary type adopting the Anglo-American Code of Cataloguing. Leading periodicals in Sciences and Humanities which are not received gratis are subscribed for.

Reference and Reader's advisory service is organized with a trained group of Reference Assistants.

The University has been conducting a professional Diploma Course in Library Science under the Faculty of Arts, of the duration of an academic year, to impart training and study to graduates entering the Library profession. Steady progress has been maintained in this direction from 1942. The U. P. Government has instituted a Scholarship of Rs. 2,000 per annum for the study of Library science in this University, and the institution of higher degree courses has been engaging the attention of the authorities.

Provision for Research

Facilities for research exist in the following subjects:—

Arts	English, Philosophy, Psychology, Samskrit, Hindi, Economics, History, Ancient Indian History and Culture, Indology, Political Science, Mathematics and Geography.
Science	Chemistry, Physics, Spectroscopy, Botany, Zoology, Geology, Mathematics and Geography.
Technology	Industrial Chemistry, Ceramics, Glass Technology, Pharmaceutics, Mining, Metallurgy, Agriculture and Engineering.

There are 19 Fellowships as follows:—

3 Holkar Fellowships of the annual value of Rs. 3,000 each for study abroad.

3 Sayaji Rao Gaikwad Fellowships of the monthly value of Rs. 100 each.

3 Mayurbhanj Fellowships of Rs. 100 per month.

There are other scholarships in the College of Indology several U. P. research scholarships and about 50 junior and senior research scholarships besides about a dozen research assistantships under various schemes sanctioned by the Government of India.

The Associations in the University

1. The University Parliament.
2. The University Union.
3. The Boarders' Unions.
4. The Athenaeum for study and research in English Literature.
5. The Scientific Society.
6. The Engineering Society.
7. The Mining and Metallurgical Students' Society.
8. The Economic Society.
9. The Historical Society.
10. The Sanskrit Association.
11. The Philosophical Association.
12. The Mathematics Association.
13. The Hindu Sahitya Sabha.
14. The Pharmaceutical Society
15. The Athletic Association.
16. The Ceramics Association.
17. The Geographical Society.
18. The Jain Association.
19. The Sikh Association.
20. The Buddhist Association.
21. The International Students Association.
22. The Kerala Association.
23. The Tamil Association.
24. The Andhra Association.
25. The Kanadā Association.
26. The Punjabi Association.
27. The Bengali Association.
28. The Rajasthan Association.
29. The Gujarati Association.
30. The Maharashtra Association.
31. The Oriya Association.
32. The Assamee Association.
33. The Bihari Association.
34. The Nepali Association.

Residence and Cost of Living

The University Regulations require every student of the University to reside in a University Hostel or, if he is a student of a constituent college, in a college hostel, unless allowed by the Vice-Chancellor or the Pro-Vice-Chancellor to reside with his parents or guardians under prescribed conditions. There are at present twelve hostels on the University grounds accommodating over three and a half thousand students and two more in the city accommodating over 200 students. All the hostels are under the care and management of Wardens, Chief Wardens

and the Provost. Special care is taken of the health of boarders and qualified Medical Officers have been appointed for the purpose. Besides these hostels there are about half a dozen approved lodges in which nearly five hundred students reside. All the approved lodges are also under the care and management of Wardens and Chief Wardens.

International House

With the increase in the number of foreign students in the University, the University authorities have allotted one large fully equipped bungalow for the residence of foreign students coming for study in this University from many parts of the world, such as, the Federation of Malaya, Nepal, Fiji, Ceylon, East Africa, Japan, the U.S.A., China, etc. This International House is under the care and management of a Warden, Dr. R. S. Choudhuri. All facilities including medical aid are provided. The cost of living is a little higher than that in the other hostels.

The cost of living (which has gone up considerably) including tuition fees varies from Rs. 70 to Rs. 125 according to the Faculty to which a student belongs. The students of the Sanskrit Mahavidyalaya are charged no fees for lodging, light and service.

Finances of the Universities

At the close of the year the property and assets of the University amounted to Rs. 4,19,91,184-13-10½, which mainly included :

- (i) Government Securities and shares in Joint Stock Companies amounting to Rs. 1,30,50,310-0-0.
- (ii) Capitalised value of the Perpetual Annuities and Pension payment order Rs. 6,17,204-11-4.
- (iii) Land and Buildings amounting to Rs. 1,48,08,550-11-11.
- (iv) Equipment, Machinery, tools, plants, books, furniture, etc., amounting to Rs. 89,47,265-6-6.

In the year 1953-54 the revenue receipts of the University from various sources amounted to Rs. 58,75,991-14-2 and the Revenue payment to Rs. 57,52,347-9-1 resulting in surplus of Rs. 1,23,644-5-1. The total Revenue Receipts and Expenditure of the institutions under C. H. School Board amounted to 1,70,404-6-0 and Rs. 1,99,364-1-5 respectively resulting in a deficit of Rs. 19,959-11-5. The total General Fund capital receipts during the year from various sources came to Rs. 1,24,429-8-3 and the General Fund capital payments to Rs. 2,06,703-6-8. The amount of donations received during the year 1953-54 was Rs. 12,73,655-8-6 out of which a sum of Rs. 21,211-6-0 was for Endowment of Scholarships

and Prizes ; Rs. 1,08,613-13-0 for general purposes ; and Rs. 11,43,830-5-6 for special objects.

Provident Fund

Every permanent employee of the University, receiving a salary of Rs. 20 and more per mensem is required to subscribe to the Provident Fund at the rate of 6½ per cent, and the University also contributes at the same rate.

Women's Education

There is a separate college for women which offers instruction upto the B.A. standard in the Faculty of Arts and upto the Intermediate standard in the Faculty of Science. They are given physical training also.

The students reside in the Khatau Makanji Hostel and in the New Hostel.

Information Bureau

The University has established an Information Bureau for advising students who wish to go abroad. Attempts have been made to collect information about many Universities and institutions in the United Kingdom and America.

Provision for Safeguarding, Health, Medical Inspection, Discipline, etc.

There are medical officers in the University who reside in quarters assigned to them. They are not only required to attend to the medical needs of the residents in the University area but are also required to undertake the medical examination of the student of the University once a year.

The University maintains extensive play grounds covering 300 acres of land furnishing ample facilities for football, cricket, hockey, tennis and other games. The gymnasiums is equipped with all necessary fitting and facilities and a big stadium offers facilities for general Track Athletics and other sports as well.

For maintaining discipline among students, the University has appointed a Chief Proctor and Proctors under him, who control the discipline of the students and decide their disputes, etc., under certain rules and regulations.

National Cadet Corps

The University has a four company battalion of the National Cadet Corps in which 625 cadets are given training. It is commanded by an army officer from a regular unit, who has under him a permanent staff of J.C.Os. and N.C.Os. There are 15 Senior Division Command Officers appointed from among the teaching staff of the University. There is also an E.M.E. section stationed in the Engineering College, wherein 60 cadets are given training.

Admission to the University Degrees and Examinations

The University offers the following degrees and diplomas:—

- (1) Faculty of Oriental Learning :
 - (a) Degree of Shastri
 - (b) Degree of Shastracharya.
- (2) Faculty of Theology :
 - (a) Degree of Veda Shastri
 - (b) Veda Shashtracharya
 - (c) Karma Kand Shastri
 - (d) Diploma in Paurohitya.
- (3) Faculty of Arts (Degrees) :
 - (a) B.A.
 - (b) B.Com.
 - (c) M.A.
 - (d) M.Com.
 - (e) Ph.D.
 - (f) D.Litt.
 - (g) B.Ed.
 - (h) M.Ed.
 - (i) Diploma in
 - (i) German
 - (ii) French
 - (iii) Chinese
 - (iv) Clinical Psychology
 - (v) Japanese
 - (vi) Library Science.
 - (j) Certificates in
 - (i) Hindi
 - (ii) Bengali
 - (iii) Telugu
 - (iv) Gujarati
 - (v) Statistical Method.
- (4) Faculty of Science (Degrees) :
 - (a) B.Sc.

- (b) M.Sc.
 - (c) Ph.D.
 - (d) D.Sc.
- (5) Faculty of Technology (Degrees) :
- (a) B.Sc. (Engineering)
 - (b) B.Sc. (Mining)
 - (c) B.Sc. (Metallurgy)
 - (d) B.Sc. (Fuel Technology)
 - (e) B.Sc. (Industrial Chemistry)
 - (f) B.Sc. (Chemical Engineering)
 - (g) B.Sc. (Glass and Ceramics)
 - (h) M.Sc. (Glass) Tech.
 - (i) M.Sc. (Ceramics) Tech.
 - (j) B.Pharm.
 - (k) M.Pharm.
 - (l) B.Sc. (Agri.)
 - (m) M.Sc. (Agri.)
 - (n) Ph.D.
 - (o) D.Sc.
 - (p) Diploma in Soap Manufacture.
- (6) Faculty of Law (Degrees) :
- (a) LL.B.
 - (b) LL.B. Hons.
 - (c) LL.M.
 - (d) LL.D.
- (7) Faculty of Medicine and Surgery (Ayurveda) :
- (a) A.B.M.S. (Ayurvedacharya, Bachelor of Medicine and Surgery.)
- (8) Faculty of Music and Fine Arts :
- (a) Sangitalankar
 - (b) Sangitacharya
 - (c) Diploma in Junior Painting
 - (d) Diploma in Senior Painting
 - (e) Diploma in Junior Sculpture
 - (f) Diploma in Senior Sculpture.

Courses of Study

Praveshika Examination.—The examination is held for admission of students to the courses of study under the Faculties of Oriental Learning and Theology. The subjects for the examination are: (1) Sanskrit, (2) a Modern Indian Language, (3) Mathematics, (4) History and Geography, or further course in Sanskrit Grammar and Literature, (5) Elementary Logic and if chosen, one of the following:—English, Drawing and Manual Training, Agriculture and Surveying.

Madhyama Examination.—Those who have passed the Pravesika or an equivalent examination are admitted to the Intermediate (Madhyama) courses. The course of study extends over a period of three years. Candidates are examined in (Sanskrit Language) a Modern Indian Language and any one of the following subjects: Advanced Sanskrit Grammar and Literature, a School of Indian Philosophy, Hindu Law and Jurisprudence, Hindu Astronomy and Mathematics and Purana.

Examination for the Degree of Shastri.—This is a three years' course after passing the Madhyama Pariksha. Candidates are examined in Sanskrit Language and Literature, a Modern Indian Language and Literature and one of the following subjects:—Advanced course in Sanskrit Grammar, Advanced course in Sanskrit Literature, Advanced course in the Vedas and Vedic Sanskrit, A School of Indian Philosophy, Hindu Law and Jurisprudence, Hindu Astronomy and Mathematics A further course in Purana. History Palaeography and Epigraphy, Prakrit and Pali and English.

Examination for the Degree of Shashtracharya.—This is a thesis examination which may be taken up by the candidate three years after passing the Shastri Examination in one of the subjects prescribed for the Shastri Examination. As in all advanced examinations, there may also be an examination, written, oral or both.

Faculty of Theology

The Madhyama Pariksha.—It is a course of study extending over years including Sanskrit (Srutī, Smṛiti, Purana and Itihasa), Grihya Sutra, Elementary Jyotisha, Dasakarma Paddhati (Rituals and Ceremonies). Candidates who have passed the Pravesika or an equivalent examination are admitted to these courses.

Degree of Vedashastri.—This is more like an examination in Rituals of Hindu Religion and is a course spreading over three years and is open only to those who can study the same according to the accepted usage of the community.

Degree of Vedacharya.—This is a thesis examination (supplemented by an examination, if necessary, oral, written or both) conducted three years after the candidate has passed the Dharma Shastri Examination.

Degree of Karma Kand Shastri.—The examination for the degree of Karma Kand Shastri will be held in two parts (Khandas), one at the end of the second year and the other at the end of the third year. Admission to the course is given to those candidates who have passed the Madhyama Examination and to those who have passed the Paurohitya Ratna Examination of the University.

Diploma Examination in Paurohitya

In addition to the above courses there is a separate Diploma Examination in Paurohitya. The duration of the course is two years with a University Examination at the end of the second year. The course is open to candidates who have passed the Praveshika or an equivalent examination.

Faculty of Arts

Admission Examination.—The Admission Examination in the case of candidates for admission to the course of study in Arts and Science consists of papers on :

Group A

(i) Hindi

or

Any other Modern Indian Language.

(ii) History or Geography.

(iii) Any three subjects from any one of the following two sections :

Section I

(a) English.

(b) History.

(c) Geography

(d) Civics.

(e) Music (Vocal).

(f) Music (Instrumental).

(g) Mathematics.

(h) A Classical Language (Sanskrit or Pali or Persian).

(i) Domestic Science.

(j) General Science.

(k) Hindi (for those who do not take Hindi under (i) above).

Section II

(a) English.

(b) Wood Craft.

(c) Book Craft.

(d) Agriculture.

(e) Commerce.

(f) General Science.

(g) Drawing.

(h) History.

(i) Geography.

(j) A Classical Language (Sanskrit, Pali or Persian).

(k) Civics.

(l) Mathematics.

(m) Hindi (for those who do not take Hindi under (i) above.)

- Note :** (a) Those who take Agriculture will have to take General Science and those who take Commerce will have to take English.
- (b) Subjects offered under (ii) should not be repeated in (iii).

Group B

- (i) Hindi
or
Any other Modern Indian Language.
- (ii) English.
- (iii) Mathematics.
- (iv) Physics and Chemistry
- (v) Any one of the following subjects :
- (a) Botany.
 - (b) Zoology.
 - (c) Agriculture.
 - (d) Geography.
 - (e) Domestic Science.
 - (f) Sanskrit.
 - (g) Wood Craft.
 - (h) Book Craft.
 - (i) Commerce.
 - (j) Drawing.
 - (k) History.
 - (l) Civics.
 - (m) Hindi (for those who do not take Hindi under (i) above).

Group C

- (i) Hindi
or
Any other Modern Language.
- (ii) Any two or three of the following subjects :
- (a) Music (Vocal).
 - (b) Music (Instrumental).
 - (c) Painting.
 - (d) Domestic Science.
- (iii) Any two or one of the following subjects :
- (a) English.
 - (b) History.
 - (c) Geography.
 - (d) A Classical Language (Sanskrit or Pali or Persian).
 - (e) Mathematics.
 - (f) General Science.
 - (g) Civics.

- (h) Hindi (for those who do not take Hindi under (i) above.)

Intermediate Examination in Arts and Science :— Candidates who have passed the Admission Examination or an equivalent examination are admitted to the courses of study for the Intermediate Examination in Arts and Science.

Candidates who have passed the following examinations may also be admitted in the I.A., and I.Sc., classes after satisfying the conditions given as below :—

1. The Senior Oxford Local Examination.
2. The Senior Cambridge Local Examination.
3. The Final Examination prescribed for European schools.
4. The Diploma Examination in a Chief's College.

Provided that candidates who have passed the Cambridge school certificate (Senior Local) Examination in five of such subjects as are recognised for the Admission Examination of the Banaras Hindu University may be admitted to the Intermediate (Arts or Science) Examination in the academical year following that in which they pass the Cambridge School Certificate (Senior Local) Examination if they have pursued a regular course of study in a constituent college of the University for not less than one academic year preceding the examination. The Standing Committee may also so admit candidates coming from outside India, who produce certificates of having passed examinations, which in the opinion of the Standing Committee are equivalent to the above mentioned examinations or who have, in the opinion of the Standing Committee, if necessary, after examination, attained a degree of knowledge equivalent to that expected at the Admission Examination. Provided that a candidate who has passed the Previous Examination in Sanskrit or has passed the Admission Examination or any examination as equivalent thereto with Sanskrit, may take up any one of the optional subjects in lieu of Sanskrit.

The subjects of examination shall be the following :—

- I. Compulsory subjects :
 - (a) English.
 - (b) Composition in a Modern Indian Language.
- II. Optional subjects :

Three subjects confined to one of the following groups :

For Intermediate Examination in Arts

Group A—

- (c) Sanskrit, and
- (d) and (e) Any two of the following subjects, viz. :
 - (1) Another Classical Language.
 - (2) A Modern European Language.

- (3) Mathematics.
 - (4) History.
 - (5) Logic.
 - (6) Elementary Psychology.
 - (7) Drawing.
 - (8) Manual Training.
 - (9) Elementary Economics.
 - (10) Geography.
 - (11) A Modern Indian Language and Literature.
 - (12) Civics.
 - (13) Music
 - (14) Painting
 - (15) Domestic Science
- } For women candidates only.

For Intermediate Examination in Science

Group B—

Any one of the following combinations :

- (1) Physics, Chemistry and Mathematics.
- (2) Physics, Chemistry and Biology.
- (3) Chemistry, Biology and Geography.
- (4) Physics, Biology and Geography.
- (5) Mathematics, Physics and Geography.
- (6) Physics, Chemistry and Geography.

Provided that women candidates shall be allowed to offer Domestic Science in place of Physics or Chemistry.

Intermediate Examination in Commerce:— A candidate who is eligible for admission to courses of studies for the Intermediate Examination in Arts or Science is eligible for admission to courses of studies for the Intermediate Examination in Commerce. The examination is held at the end of two academic years.

The subjects of examination shall be the following :

Compulsory subjects :

- (1) English.
- (2) Composition in a Modern Indian Language.
- (3) Elements of Accounting.
- (4) Business Methods and Correspondence.
- (5) Elementary Economics and Elements of Money and Banking.
- (6) Any two of the following optionals, carrying 100 marks each :

- (1) Shorthand.
- (2) Type-writing.
- (3) Insurance.
- (4) Advertising and Salesmanship.
- (5) Commercial Geography.
- (6) Commercial Mathematics.

Note.—Candidates appearing at the Admission Examination in Arts and Science or the B.A., B.Sc., B.Ed., or M.A. Examinations will have the option of answering question papers in the Hindi language and the Devanagari Script in all subjects except English.

B.A.—A candidate for this examination must study for a period of two years in the University after passing the Intermediate Examination in Arts or Science. The subjects of the examination are the following :—

I. Compulsory subjects :

- (i) English
- (ii) Sanskrit.
- (iii) Composition in a Modern Indian Language.

II. Optional subjects :

(iv) and (v) Any two of the following :

- (a) Any other Classical Language (Persian, Arabic or Pali).
- (b) A Modern European Language including English.
- (c) Philosophy.
- (d) Psychology.
- (e) Mathematics.
- (f) History.
- (g) Ancient Indian History and Culture.
- (h) Economics.
- (i) Geography.
- (j) Politics.
- (k) A Modern Indian Language and Literature (Hindi only).
- (l) Music
- (m) Painting
- (n) Domestic Science

} For women candidates only

Provided that a candidate who has passed the Previous Examination in Sanskrit or has passed the Admission Examination or any Examination accepted as equivalent thereto or has passed the Intermediate Examination with Sanskrit as one of his subjects may take up any one of the optional subjects in lieu of Sanskrit.

Honours.—A candidate may obtain Honours in any subject if he passes in the First Class in that subject as well as in a more advanced course in that subject prescribed for the purpose provided he obtains at least 45 per cent marks in the aggregate of the remaining subjects.

Composition in a Modern Indian Language does not count as an independent subject for this purpose.

B.Com. Examination :— A candidate for this examination must study for a period of two years in the University after the I.Com. Examination of this or any other University. The subjects of the examination are the following :—

I. Compulsory subjects :

- (i) English
- (ii) Composition in a Modern Indian Language.
- (iii) Economics Group :
 - (a) Principles of Economics, (b) Banking Currency, and Finance, (c) Modern Economic Development of India.
- (iv) Commerce Group :
 - (a) Accountancy.
 - (b) Business and Industrial Organisation.
 - (c) Statistics.
 - (d) Commercial Law and Secretarial Practice.

II. Optional subjects : One of the following groups of optional subjects :—

- (i) (a) Advanced Accountancy.
- (b) Auditing.
- (ii) (a) Advanced Banking Principles.
- (b) Law and Practice of Indian Banking.
- (iii) (a) Rural Economics.
- (b) Co-operation.
- (iv) (a) Trade.
- (b) Transport.
- (v) (a) Insurance.
- (b) Elements of Actuarial Science.

M.A.—Candidates for the Degree of Master of Arts shall be required to pass two examinations, the first called "M.A. (Previous)" and the second "M.A. (Final)". The M.A. (Previous) Examination shall be open to candidates who have obtained the degree of B.A., or B.Sc., of the University or, in special cases, by permission of the Standing Committee of the Academic Council, of some other Indian University established by an Act of Legislature, or of the University of Mysore and have, after obtaining that degree, completed a regular course of study for not less than one year in the University or in a constituent College. The Standing Committee of the Academic Council may also in special cases, permit candidates who have obtained the degree of B.Com. in an Indian University established by an Act of an Indian Legislature, or the University of Mysore, provided they have satisfied the other conditions in this regulation to appear at the examination (in Economics for the M.A. Degree).

The M.A. (Previous) Examination (in Sanskrit, Hindi and Pali only) shall also be open to candidates who have passed the Acharya Examination in Sanskrit in the Faculty of Oriental Learning and Theology of the University and have pursued a regular course of studies for not less than one academic year in the University or in a constituent college and on passing the M.A. (Final) Examination, shall be awarded the degree of Master of Arts of the University.

Notwithstanding anything contained in Regulation 3, a bona fide teacher teaching in any of the following kinds of institutions, viz.:—

- (a) A high school or institution recognised by the Banaras Hindu University for the purpose of Admission or Intermediate Examination;
- (b) A high school or institution situated in Banaras and recognised by the Government of Uttar Pradesh;
- (c) A high school or institution situated anywhere else in Indian Union or in an Indian State;

may be admitted to the examination by the special permission of the Standing Committee of the Academic Council, under certain conditions (See Prospectus).

A candidate may be examined in any one of the following subjects:—

- (1) English, (2) Sanskrit, (3) Pali, (4) Any other classical language, (5) Philosophy, (6) Indian Philosophy and Religion, (7) Psychology, (8) History, (9) Ancient Indian History and Culture, (10) Economics, (11) Geography, (12) Politics, (13) Mathematics, (14) A Modern Indian Language and Literature.

No candidate shall be admitted to the M.A. (Final) Examination, unless he has passed the M.A. (Previous) Examination and has prosecuted a regular course of study thereafter for not less than one academic year in the constituent University.

Nearly half of all the papers prescribed for each subject have to be taken in the M.A. (Previous) Examination and the rest in the M.A. (Final) Examination.

M.Com.—The University has instituted courses for the M.Com. Examination spreading over a period of two years. There is an M.Com. (Previous) Examination at the end of the first year and the M.Com. (Final) Examination at the end of the second year.

The M.Com. (Previous) Examination shall be open to candidates who have obtained the degree of B.Com. of this University or of any other Indian University established by an Act of Legislature. The subjects of M.Com. (Previous) Examination are:—

(a) Two compulsory papers :

Paper I: Principles of Economic Analysis.

Paper II: Modern Economic Development of England, U.S.A., Germany, U.S.S.R. and Japan.

(b) Two optional papers to be chosen from the following :

(i) Foreign Exchange.

(ii) Organisation of Markets.

(iii) Income-tax Law and Accounts.

(iv) Statistical Methods and Sources.

(v) Organisation of Industries.

The M.Com. (Final) Examination shall consist of (a) either the Diary of Practical Training, which shall carry 100 marks or a dissertation carrying 100 marks and (b) the following three papers :—

Compulsory : Paper I: Applied Economics.

Any two papers to be chosen from the following :—

(i) Modern Finance.

(ii) Business Administration.

(iii) International Trade.

(iv) Labour Economics and Labour Problems.

(v) Economics of Public Utilities.

Doctor of Philosophy :— The Ph.D. Degree is conferred on candidates who possess the qualifications and have pursued a course of research at the University or at such other institutions as may be recognised by the Syndicate, according to the provisions contained in these regulations.

It is open to—

- (a) those who have passed the examination for the degree of M.A., M.Sc., M.Sc. (Tech.), M.Sc. (Agriculture), M. Pharm., and M.Com. of the University or an examination of any other University recognised as equivalent to any of the above-mentioned examinations and who have pursued a regular course of research at the University for not less than six terms. The terms in an academic year are: July to September, October to December and January to April;
- (b) those who have passed the Final examination for the degree of B.Sc. (Min.), B.Sc. (Met.) and B.Sc. (Eng.) of this University or an Examination of any other University recognised as equivalent to any of the above mentioned examinations and who have pursued a regular course of research at the University for not less than three academical years;

- (c) those candidates who have passed the examination for the degree of M.A., M.Sc., M.Sc. (Tech.), M.Sc. (Ag.), M.Pharm. and M.Com. of the University or the Final examination for the degrees of M.Sc. (Min.), B.Sc. (Met.), and B.Sc. (Eng.) of the University and have pursued a regular course of research for a period of three years at any of the institutions listed hereunder.* Every candidate who intends to supplicate for the said degree shall register himself two years previous to submitting the thesis and shall communicate to the Registrar the special subject chosen by him for his thesis. No application for admission to the said degree shall be entertained unless it is supported by the Supervisor under whom he has carried on his research and the Director of the Institute who shall have to testify that the applicant is in habits and character a fit and proper person for the degree. The communication shall be placed before the Syndicate for according the necessary permission.

Doctor of Letters :— This degree is conferred after the approval of the candidate's thesis and, if necessary, after a written and oral examination.

The degree shall be open to :—

- (a) those who obtained the Ph.D. degree of this University not less than three academical years previously to the date of supplication ;
- (b) those who have obtained the M.A. or M.Com. degree of this University not less than seven academical years previously to the date of supplication ; and
- (c) those who are teachers of the University who have obtained the M.A., or M.Com. degree of this or any other University established by an Act of Legislature or have passed an examination recognised as equivalent thereto, and have put in not less than six years' service in the University prior to the date of supplication ; provided that no candidate under clauses (b) and (c) shall be allowed to supplicate for the degree unless he has been exempted, on an application presented for the purpose, stating the grounds on which such exemption is claimed,

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- * 1. Indian Institute of Science, Bangalore.
 - 2. The Phalaeobotany Institute, Lucknow..
 - 3. Tata Institute of Fundamental Research, Bombay.
 - 4. The Indian School of Mines, Dhanbad.
 - 5. The Horticultural Research Institute, Saharanpur.
 - 6. The Nutrition Research Laboratories, Coonoor.

by the Research Degree Committee from having to obtain the Ph.D. degree.

Teaching

B.Ed. :— The course of study is open to graduates of this or any other University and extends over a period of one year. The course of study and the scheme of examination are as follows :

The subjects of the Examination are the Theory and Practice of Education :

(A) Theory

There will be four papers set as follows :

1. Principles of Education.
2. History of Education.
3. Methods of Teaching.
4. School Management and Hygiene.

(B) Practice

This will consist of attendance at Demonstration lessons given by the members of the staff of the college, observation of criticism lessons given in the subjects taken up by a pupil teacher, practice of teaching carried on ordinarily in three subjects for at least three months under the supervision of the College staff, two criticism lessons given in the subjects offered by a pupil teacher, Art and Craft work, visit to educational institutions and Pedagogical Drawing

A candidate may, in addition, offer as an extra subject, a special course in the methods of teaching one of the subjects prescribed for the Admission Examination or one of the following subjects :

Basic Education, Infant Education, Experimental Education, Adult Education, Vocational Education, Physical Education, Linguistic Pedagogy, Art, Music, Sculpture and Spinning and Drawing.

M.Ed. :— A higher degree in Education, called M.Ed., is instituted spreading over a period of one year after B.Ed. degree.

The Examination for the degree of Master of Education shall be open to a candidate who has (i) after graduation passed the B.Ed., B.T., or L.T. Examination or an equivalent examination held by a Provincial Government or by any University in India recognised by the law of the place in which it is situated or of any University or body which the Syndicate may from time to time recognise for this purpose, and (ii) has pursued for one session the prescribed course of study at the University.

The course of study for the M.Ed. Examination shall be confined to *either* an Advanced study in Education *or* writing of a thesis in a

subject approved by the Head of the Department of Education in the University.

The Examination in the Advanced study in Education shall consist of :

- Paper I. Educational Philosophy and Theory.
- Paper II. Educational Psychology and Experimental Education.
- Paper III. History of Indian Education.
- Paper IV. A comparative study of the modern Educational Methods, practice and systems of some of the advanced countries of the world.
- Paper V. Any one of the following :
 - (i) Experimental Education.
 - (ii) Adult Education.
 - (iii) Basic Education.
 - (iv) Vocational and Educational Guidance.
 - (v) Educational Administration and Supervision.

*Diploma Examination in Modern European Languages
French, German and Italian*

Any student who has passed the Admission or an equivalent examination and is pursuing his studies in the University is eligible to appear for the examination. The course spreads over two years.

Diploma in Library Science

With a view to improving the libraries, a Diploma examination in Library Science of one year's duration is instituted in the University. The course is open to graduates of Indian Universities. Instruction is given in the following subjects.

Group I

Library classification : Theory and Practice.

Group II

Library cataloguing : Theory and Practice.

Group III

Library Organisation.

Library Administration.

Bibliography, Book-selection and Reference Service.

Diploma in Indian Philosophy and Culture

A Post-graduate Diploma Examination in Indian Philosophy and Culture is instituted in the University spreading over a period of one year and graduates of Indian or foreign Universities are eligible for

admission to this course. The course is mainly intended to foreign graduates with a view to giving them facilities for acquainting them with the Indian Philosophy and Culture but it is now open to all graduates and the subjects of the Examination are: (1) Indian Philosophy, (2) Modern Indian Religious and Philosophical Thought, (3) Religions of India and (4) Hindu Social and Socio-Religious Institutions and Customs.

Diploma Examination in Chinese

A Diploma Examination in Chinese is instituted spreading over a period of two years and the course is open to those who have passed the Admission or Matriculation Examination of Indian Universities.

Music and Fine Arts

The Senate has instituted courses in Music leading to the degree of Sangitacharya. There will be four University Examinations in Music:

- (i) Sangita Praveshika extending over a period of two years.
- (ii) Sangita Madhyama (Intermediate) spreading over a period of two years.
- (iii) Sangitalankara (B.A.) spreading over a period of three years.
- (iv) Sangitacharya (M.A.) spreading over a period of two years.

There is a Research Department in the college under a Professor of Research. It undertakes the collection, transcription and edition of ancient works on Music and Fine Arts as well as the preparation of a Dictionary of Indian Musical terms. It will also guide students for Research degrees.

Diploma in Painting and Sculpture

The University has decided to start a Diploma course in Painting and Sculpture and two Diplomas called Junior Diploma and Senior Diploma are instituted covering a period of two years, and two years respectively. The course is open to those who have passed the Admission or Matriculation Examination of Indian Universities.

Faculty of Science

The Intermediate Examination in Arts and Science under the Faculty of Arts has already been mentioned.

B.Sc. :—It is a two years' course after passing the Intermediate Examination in Science.

The subjects of examination are the following :—

Any one of the following groups :

- (a) Physics, Chemistry, Mathematics.
- (b) Physics, Chemistry, Geology.
- (c) Botany, Chemistry, Zoology.
- (d) Botany, Chemistry, Geology.
- (e) Zoology, Chemistry, Geology.
- (f) Botany, Zoology, Geology.
- (g) Geology, Geography, Chemistry.
- (h) Geology, Geography, Physics.
- (i) Geology, Geography, Botany.
- (j) Geology, Geography, Zoology.

Provided that no candidate is permitted to take up group (a) or (b) unless he has passed his Intermediate Examination with Mathematics and group (c), (d) or (e) unless he has passed his Biology and in the case of a student who has passed the Intermediate Examination of any other University or Board of High School and Intermediate Education established by an Act of the Legislature, with Physics, Chemistry and Biology or Botany. Women candidates are allowed to offer Domestic Science in place of any one of the subjects in any of the groups. A candidate may also offer English (Modern and Practical) as an extra subject.

Honours :—A candidate may obtain Honours in any subject if he passes in the First Class in that subject as well as in a more advanced course in that subject prescribed for the purpose provided he obtains at least 45 per cent marks in the aggregate of the remaining subjects.

Master of Science :—Candidates for the degree of Master of Science shall be required to pass two examinations, the first called, "M.Sc. (Previous)" and the second "M.Sc. (Final)".

The M.Sc. (Previous) Examination shall be open to candidates who have obtained the degree of B.Sc., in this University, or in special cases, by permission of the Standing Committee, the degree of B.Sc., or the degree of B.A., with science subjects, in some other Indian University established by an Act of the Legislature.

Notwithstanding anything contained in Regulation 3 of the prospectus, a *bona fide* teacher teaching in any of the following kinds of institutions, viz. :

- (a) A school or institution recognised by the Banaras Hindu University for the purpose of Admission or Intermediate Examination.
- (b) A school or institution situated in Banaras and recognised by the Government of the Uttar Pradesh.

- (c) A school or institution situated anywhere else in British India or in Indian State may be admitted to the examination by the special permission of the Standing Committee under certain conditions (see prescribed prospectus).

No candidate shall be admitted to the M.Sc. (Final) Examination, unless he has passed the M.Sc. (Previous) Examination and prosecuted a regular course of study thereafter for not less than one year in the Science College of the University.

The Examination shall be conducted by means of papers and also *viva voce* in subjects which admit to it. Candidates shall also be required to undergo a practical examination

A candidate may be examined in any one of the following subjects :—

- (1) Mathematics, (2) Physics, (3) Chemistry, (4) Botany,
(5) Zoology, (6) Geology, (7) Geophysics, and
(8) Geography

Ph.D. :— Ph.D. degree is instituted in this University (Refer to Regulations for Ph.D. degree in the Faculty of Arts given above).

D.Sc. :— This degree is conferred after the approval of the candidate's thesis, if necessary after a written and oral examination. The degree shall be open to—

- (a) those who have obtained the Ph.D. degree in the Faculty of Science of this University not less than three academical years previously to the date of supplication ;
- (b) those who have obtained the M.Sc. degree of this University not less than seven academical years previously to the date of supplication ; and
- (c) those who are teachers of the University who have obtained the M.Sc. degree of this or any other University established by an Act of Legislature or have passed an examination recognised as equivalent thereto and have put in not less than six years' service in the University prior to the date of supplication ; provided that no candidate under clauses (b) and (c) shall be allowed to supplicate for the degree unless he has been exempted, on an application presented for the purpose stating the grounds on which such exemption is claimed by the Research Degree Committee from having to obtain the Ph.D. degree.

COURSES OF STUDY LEADING TO PROFESSIONS

Faculty of Technology

B.Sc. (Industrial Chemistry).—The duration of the course is two years and candidates who have passed the I.Sc. Examination either from this University or any other Indian University or Board established by an Act of the Legislature with Physics, Chemistry and Mathematics are eligible for admission. The subjects for the examination are Chemistry, Industrial Chemistry and General and Chemical Engineering.

M.Sc. (Industrial Chemistry)—M.Sc. Tech.:—This is a two years, post-graduate course open to graduates in Industrial Chemistry. The duration is only one year for such candidates as have passed the M.Sc. Examination with Chemistry. The Optional subjects for study are Oils and Soaps, Protective Coatings, Carbohydrate Industries, Dye Intermediates and Dyestuffs, Fine Inorganic and Organic Chemicals.

Bachelor of Science in Chemical Engineering

For the Degree of Bachelor of Science in Chemical Engineering a candidate shall be required to pass four examinations called Bachelor of Science in Chemical Engineering Part I, Part II, Part III and Part IV. The minimum qualification for admission to the course is a pass in I.Sc. with Physics, Chemistry and Mathematics. There is a University examination at the end of each year.

The subjects for the Examination in Bachelor of Science in Chemical Engineering Part I shall be the following :

- (1) Mathematics, (2) Inorganic Chemistry, (3) Physical Chemistry, (4) Applied Mechanics and Heat Engines, (5) Organic Chemistry, (6) Industrial Calculations, (7) Engineering Drawing, (8) Geology and Mineralogy.

The subjects for the Examination in Bachelor of Science in Chemical Engineering Part II shall be the following :

- (1) Mathematics, (2) Organic Chemistry, (3) Applied Mechanics, (4) Engineering Thermodynamics, (5) Unit Operations, (6) Electrical Engineering, (7) Engineering Drawing, (8) Workshop Practice, (9) Physico-chemical measurements.

The subjects for the Examination in Bachelor of Science in Chemical Engineering Part III shall be the following :

- (1) Chemical Engineering Thermodynamics, (2) Elements of Engineering Design, (3) Unit Operations, (4) Heat Engines and Power Plant Engineering, (5) Electrical Engineering, (6) Engineering Metallurgy, (7) Chemical Technology.

The subjects for the Examination in Bachelor of Science in Chemical Engineering Part IV shall be the following:

- (1) Unit Operations, (2) Chemical Technology, (3) Industrial Economics and Factory Management, (4) Fuel Technology, (5) Chemical Engineering Equipment Design and Fabrication, (6) Plant Design, (7) Chemical Engineering Calculations, (8) Thesis or Electives.

Diploma Examination in Soap Manufacture

Candidates who pass their Intermediate Science and B.Sc. Examination with Chemistry as one of their subjects are eligible for admission to this course which extends to two years in the former case and to one year in the latter case.

Bachelor of Technical Science (Glass and Ceramics)

Candidates for the degree of Bachelor of Technical Science (Glass and Ceramics) shall be required to pass three examinations, the first being called B.Sc. Tech. (Glass and Ceramics) Part I, the second B.Sc. Tech. (Glass and Ceramics) Part II and the third B.Sc. Tech. (Glass and Ceramics) Part III. All these examinations shall be held once a year in Banaras.

B.Sc. Tech. (Glass and Ceramics) Part I shall be open only to those candidates who have passed the Intermediate Examination in Science with Physics, Chemistry and Mathematics, of the Banaras Hindu University or by the permission of the Standing Committee an equivalent examination of some Indian University or Board of High School and Intermediate education established by an Act of Legislature.

The subjects for the B.Sc. Tech. (Glass and Ceramics) Part I Examination shall be as follows:

- (1) Mathematics, (2) Inorganic and Physical Chemistry, (3) Applied Mechanics and Heat Engines, (4) Geology and Mineralogy, (5) Engineering Drawing, (6) General Ceramics.

The subjects for the B.Sc. Tech. (Glass and Ceramics) Part II Examination shall be as follows:

- (1) Applied Mechanics and Heat Engines, (2) Electrical Engineering, (3) Physical and Analytical Chemistry, (4) General Ceramics.

The subjects for the B.Sc. Tech. (Glass and Ceramics) Part III Examination shall be as follows:

- (1) Ceramics (Glass, Pottery and Porcelain, Refractories and Enamels), (2) Furnaces and Pyrometry, (3) Fuels, (4) Industrial Economics.

Bachelor of Pharmacy (B.Pharm.).—This is a three years' degree course, open to students who have passed the Intermediate examination, with Physics and Chemistry, of an Indian University or of a Board of Intermediate Education established by an Act of the Legislature. Candidates as have passed a Diploma Examination in Pharmacy recognised by the Central Pharmacy Council of India are also eligible for admission to our first year class. Such students as have passed the B.Sc. Examination with or without Honours or the M.B.B.S. Examination shall also have to undergo the full three years' course of training and will not be entitled to any concession by virtue of their superior qualifications. However M.Sc.'s in any branch of chemistry are granted one year's exemption, i.e., they can obtain the degree of Bachelor of Pharmacy in two years by appearing directly at the second year B.Pharm. Examination.

The subjects of the first year examination in Pharmacy shall be the following:—

- (1) Pharmaceutical Chemistry,
- (2) Pharmacy.
- (3) Pharmaceutical Biology,
- (4) Human Physiology.
- (5) German.

The subjects for the second year Examination in Pharmacy shall be the following:—

- (1) Pharmaceutical Chemistry,
- (2) Pharmacy.
- (3) Pharmacognosy.
- (4) Pharmaceutical Economics.
- (5) German (House Examination).

The subjects for the Final Examination in Pharmacy shall be the following:—

- (1) Pharmaceutical Chemistry.
- (2) Pharmacognosy.
- (3) Pharmaceutical Economics.
- (4) Pharmacy.
- (5) German (House Examination).

Master of Pharmacy

The degree of Master of Pharmacy shall be open to a candidate who has obtained the degree of Bachelor of Pharmacy or the Diploma in Pharmaceutics of this University or a degree in Pharmacy of any other University recognised by the Standing Committee as equivalent to it.

Courses of study for M. Pharm.

This is a post-graduate course in Pharmacy of approximately one and a half years' duration and the degree is obtainable partly by research and partly by examination. The following are the grouping of the subjects with distribution of papers and marks:—

Thesis comprising research work .. 400 marks

Research work shall be done in any of the branches of Pharmaceutics including Pharmaceutical Chemistry and Pharmacognocny.

Practical	.. 100 marks	Theory Paper I	.. 100 marks
Sessional	100 marks	Paper II	.. 100 marks

The courses will include advanced treatment of subjects mentioned below :

Paper I: The candidates are expected to keep themselves abreast of recent developments in the various branches of Pharmaceutics by reading journals and reviews—Antibiotics, Hormones, Vitamins, Sera and Glandular product.

Paper II: Newer Synthetic drugs included in the monographs of extra Pharmacopocia and N. F.

B.Sc. (Engineering) Mechanical and Electrical:—The minimum qualification for admission to the Degree course in Engineering is I.Sc. with Physics, Chemistry and Mathematics. The course of study and practical training covers in all five years, of which the fifth year is entirely devoted to practical training.

The candidates have to pass the following four University Examinations:—

- I.Sc. (Eng.) Part I at the end of the 1st year.
- I.Sc. (Eng.) Part II at the end of the 2nd year.
- B.Sc. (Eng.) Part I at the end of the 3rd year.
- B.Sc. (Eng.) Part II at the end of the 4th year.

The Degree of B.Sc., in Engineering is awarded to those students who produce evidence that will satisfy the Syndicate that they have spent not less than 300 days in practical work or research work in workshops or institutions. This certificate should be produced within 5 years of passing the B.Sc. Part II Examination.

Following are the branches of Engineering:—

- (1) Civil and Municipal Engineering.
- (2) Mechanical Engineering.

- (3) Electrical Engineering.
- (4) Aeronautical Engineering.
- (5) Naval Architecture and Marine Engineering.

The courses of studies and subjects of examination are as follows :—

1. I.Sc. (Eng.) Part I Examination :

(a) Written Papers in :

- (1) Mathematics, Pure and Applied.
- (2) Applied Chemistry.
- (3) Applied Physics.
- (4) Applied Mechanics.
- (5) Heat Engines.
- (6) Surveying.
- (7) Building Materials and Building Construction.
- (8) Machine Drawing.
- (9) Practical Geometry and Graphic Statics.

(b) Sessional Work in :

- (1) Applied Chemistry and Applied Mechanics Laboratory.
- (2) Applied Physics Laboratory.
- (3) Machine Drawing.
- (4) Practical Geometry and Graphic Statics.
- (5) Surveying Field Work and Plotting.
- (6) Workshop Practice.

(c) Periodical Examinations.

Minimum Pass Marks.—40 per cent in each group of written papers, 60 per cent in each subject of Sessional Work and 50 per cent in the aggregate. The classification of the results shall be : Pass 50 per cent, Second Class 60 per cent, First Class 70 per cent, of the aggregate of the marks for Sessional Work, Written Papers and Periodical examinations combined.

2. I.Sc. (Eng.) Part II Examination :

(a) Written Papers in :

- (1) Mathematics, Pure and Applied.
- (2) Applied Mechanics.
- (3) Heat Engines.
- (4) Electrical Engineering.
- (5) Machine Drawing.
- (6) Practical Geometry and Graphics.

(b) Sessional Work in :

- (1) Mechanical Engineering Laboratory.
- (2) Electrical Engineering Laboratory.

- (3) Machine Drawing.
- (4) Practical Geometry and Graphics.
- (5) Workshop Practice.

(c) Periodical Examinations.

Minimum Pass Marks.—40 per cent in each group of written papers, 60 per cent in each subject of Sessional Work and 50 per cent in the aggregate. The classification of the results shall be: Pass 50 per cent, Second Class 60 per cent, First Class 70 per cent, of the aggregate of the marks for Sessional Work, Written Papers and Periodical Examinations combined.

3. B.Sc. (Eng.) Part I Examination :

Civil and Municipal Engineering

(a) Written Papers in :

- (1) Strength of Materials.
- (2) Theory of Structures.
- (3) Buildings and Architecture.
- (4) Hydraulics and Hydraulic Machinery.
- (5) Earth Work, Roads and Railways and Aerodromes.
- (6) Bridges, Tunnels, Docks and Harbours.
- (7) Geology.
- (8) Reinforced Concrete and Civil Engineering Design.
- (9) Soil Mechanics, or Naval Architecture or Aerodynamics.

(b) Sessional Work in :

- (1) Civil Engineering Laboratory.
- (2) Geological Laboratory.
- (3) Structural Design.
- (4) Civil Engineering, Design and Estimating.
- (5) Course Work in Soil Mechanics, or Naval Architecture or Aerodynamics.

(c) Periodical Examinations :

Mechanical Engineering

(a) Written Papers in :

- (1) Strength of Materials.
- (2) Theory of Structures.
- (3) Theory of Machines.
- (4) Hydraulics and Hydraulic Machinery.
- (5) Heat Engines.
- (6) Electrical Technology.
- (7) Refrigeration, Cold Storage and Air-Conditioning, or Electrical Measurements and Measuring Instruments.

- (8) Mechanical Engineering Design.
- (9) Automobile Engineering or Naval Architecture or Aerodynamics.
- (b) Sessional Work in :
 - (1) Mechanical Engineering Laboratory.
 - (2) Electrical Engineering Laboratory.
 - (3) Structural Design.
 - (4) Mechanical Engineering Design.
 - (5) Course Work in Automobile Engineering or Naval Architecture or Aerodynamics.
- (c) Periodical Examinations.

Electrical Engineering

- (a) Written Papers in :
 - (1) Strength of Materials.
 - (2) Theory of Structures.
 - (3) Theory of Machines.
 - (4) Hydraulics and Hydraulic Machinery.
 - (5) Heat Engines.
 - (6) Electrical Technology.
 - (7) Electrical Measurements and Measuring Instruments.
 - (8) Electrical Engineering Design.
 - (9) Electrical Communication.
- (b) Sessional Work in :
 - (1) Mechanical Engineering Laboratory.
 - (2) Electrical Engineering Laboratory.
 - (3) Structural Design.
 - (4) Electrical Engineering Design.
 - (5) Electrical Installation Design.
- (c) Periodical Examinations.

Aeronautical Engineering

- (a) Written Papers in :
 - (1) Strength of Materials.
 - (2) Theory of Structures.
 - (3) Theory of Machines.
 - (4) Hydraulics and Hydraulic Machinery.
 - (5) Internal Combustion Engines and Gas Turbines.
 - (6) Electrical Technology.
 - (7) Aerodynamics.
 - (8) Applied Mathematics.
 - (9) Automobile Engineering.

(b) Sessional Work in :

- (1) Aeronautical Engineering Laboratory.
- (2) Electrical Engineering Laboratory.
- (3) Structural Design.
- (4) Internal Combustion Engine Design.
- (5) Course Work in Automobile Engineering.

(c) Periodical Examinations.

Naval Architecture and Marine Engineering

(a) Written Papers in :

- (1) Strength of Materials.
- (2) Theory of Structures.
- (3) Theory of Machines.
- (4) Hydraulics and Hydraulic Machinery.
- (5) Heat Engines.
- (6) Electrical Technology.
- (7) Refrigeration, Cold Storage and Air-Conditioning.
- (8) Marine Engineering Design.
- (9) Naval Architecture.

(b) Sessional Work in :

- (1) Naval Architecture and Marine Engineering Laboratory.
- (2) Electrical Engineering Laboratory.
- (3) Structural Design.
- (4) Marine Engineering Design.
- (5) Course Work in Naval Architecture.

(c) Periodical Examinations.

Minimum Pass Marks.—40 per cent in each group of written papers, 60 per cent in each subject of Sessional Work, 50 per cent in the aggregate. The classification of the results shall be : Second Class 50 per cent and First Class 70 per cent of the aggregate of the marks for Sessional Work and Written Papers combined.

4. B.Sc. (Engineering) Part II Examination :

Civil and Municipal Engineering

(a) Written Papers in :

- (1) Strength and Elasticity of Materials.
- (2) Theory of Structures or Aircraft Structures or Naval Architecture.
- (3) Hydraulics and Water Power Engineering or Aerodynamics.
- (4) Surveying.

- (5) Sanitary Engineering including Drainage and Water Supply.
 - (6) Town Planning and Architecture or Advanced Mathematics.
 - (7) Irrigation.
 - (8) Accounts, Estimates and Specifications.
- (b) Sessional Work in :
- (1) Civil and Sanitary Engineering Laboratory.
 - (2) Structural Design or Aircraft Structures Design or Naval Architecture Design.
 - (3) Civil and Sanitary Engineering Design.
 - (4) Surveying Field Work and Project.
 - (5) Approved Extramural Practice.

Mechanical Engineering

- (a) Written Papers in :
- (1) Strength and Elasticity of Materials.
 - (2) Theory of Structures or Aircraft Structures or Naval Architecture.
 - (3) Electrical Technology or Aerodynamics.
 - (4) Theory and Design of Machines.
 - (5) Advanced Applied Thermo-dynamics and Heat Engines.
 - (6) Hydraulics and Water Power Engineering or Automobile Engineering, or Aero-Engine and Systems of Propulsion or Surveying.
 - (7) Workshop Technology and Engineering Production.
 - (8) Industrial Organization and Works Management or Advanced Mathematics.
- (b) Sessional Work in :
- (1) Mechanical Engineering Laboratory.
 - (2) Course Work in Hydraulics and Water Power Engineering or Automobile Engineering or Aero-Engines or Surveying Field Work and Project.
 - (3) Mechanical Engineering Design.
 - (4) Structural Design or Aircraft Structures Design or Naval Architecture Design.
 - (5) Approved Extramural Training or Practical Training in the University.

Electrical Engineering

- (a) Written Papers in :
- (1) Strength and Elasticity of Materials.
 - (2) Electrical Communications or Utilisation of Electrical Power with Traction or Surveying.

- (3) Hydraulics and Water Power Engineering or High Frequency Currents and Measurements.
 - (4) Electrical Technology.
 - (5) Generation, Transmission and Distribution of Electric Power.
 - (6) Principle and Design of Electrical Machines.
 - (7) Workshop Technology and Engineering Production.
 - (8) Industrial Organization and Works Management or Advanced Mathematics.
- (b) Sessional Work in :
- (1) Electrical Engineering Laboratory.
 - (2) Electrical Machine Design.
 - (3) Electrical Installation Design or Hydro-Electric Design.
 - (4) Course Work in Electrical Communication or Utilisation of Electrical Power with Traction or Surveying Field Work and Project.
 - (5) Approved Extramural Training or Practical Training in the University.

Aeronautical Engineering

- (a) Written Papers in :
- (1) Strength and Elasticity of Materials.
 - (2) Aircraft Structures.
 - (3) Aerodynamics.
 - (4) Radio Communication.
 - (5) Aero-Engines and Systems of Propulsion.
 - (6) Aircraft Equipment.
 - (7) Workshop Technology and Engineering Production.
 - (8) Industrial Organization and Works Management or Advanced Mathematics.
- (b) Sessional Work in :
- (1) Aeronautical Engineering Laboratory.
 - (2) Radio Communication Laboratory.
 - (3) Aircraft Structures Design.
 - (4) Aero-Engine Design.
 - (5) Approved Extramural Training or Practical Training in the University.

Naval Architecture and Marine Engineering

- (a) Written Papers in :
- (1) Strength and Elasticity of Materials.
 - (2) Naval Architecture Paper I.
 - (3) Naval Architecture Paper II.
 - (4) Radio Communication.

- (5) Naval Architecture Design.
 - (6) Advanced Applied Thermo-dynamics and Heat Engines.
 - (7) Workshop Technology and Engineering Production.
 - (8) Industrial Organization and Works Management or Advanced Mathematics.
- (b) Sessional Work in :
- (1) Marine Engineering and Naval Architecture Laboratory.
 - (2) Radio Communication Laboratory.
 - (3) Marine Engineering Design.
 - (4) Naval Architecture Design.
 - (5) Approved Extramural Training or Practical Training in the University.

Minimum Pass Marks.—40 per cent in each group of written paper, 60 per cent in each subject of Sessional Work, 50 per cent in the aggregate. The classification of the results shall be : Pass 50 per cent, Second Class 60 per cent, First Class 70 per cent of the aggregate of the marks for Sessional Work, Written Papers and Periodical Examinations combined.

B.Sc. (Mining), B.Sc. (Metallurgy) and B.Sc. (Fuel Technology)

The University, offers a four-year course leading to the Degree of B.Sc. in Mining, a four-year course leading to the Degree of B.Sc. in Metallurgy and a four-year course leading to the Degree of B.Sc. in Fuel Technology to students who have passed the Intermediate Examination, with Mathematics, Physics and Chemistry, of an Indian University or Board of Intermediate Education established by an Act of Legislature.

An outline of the courses is given below :

First Year—(Common to Mining, Metallurgy and Fuel Technology) :

- (1) Mathematics.
- (2) Applied Mech., Part I.
- (3) Heat Engine, Part I.
- (4) Solid Geometry and Graphic Statics.
- (5) Engineering Drawing, Part I.
- (6) Applied Electricity, Part I.
- (7) General Chemistry.
- (8) General Metallurgy.

Second Year Examination in Mining :

- (1) Geology and Mineralogy.
- (2) Elements of Mining.
- (3) Applied Mech., Part II.
- (4) Heat Engines, Part II.
- (5) Engineering Drawing, Part II.

- (6) Surveying, Part I.
- (7) Applied Electricity, Part I.
- (8) Fuel and Assaying.

Second Year Examination in Metallurgy and Fuel Technology :

- (1) Geology and Mineralogy.
- (2) Analytical Chemistry.
- (3) Applied Mech., Part II.
- (4) Heat Engines, Part II.
- (5) Physical Chemistry.
- (6) Engineering Drawing, Part II.
- (7) Applied Electricity, Part I.

Third Year Examination in Mining Engineering :

- (1) Mining, Part I (three papers).
- (2) Mining Geology.
- (3) Survey, Part II.
- (4) Mineral Dressing.
- (5) Applied Electricity, Part II.

Third Year Examination in Metallurgical Engineering :

- (1) Blast Furnace and Foundry Practice.
- (2) Engineering Metallurgy, Part I.
- (3) Physical Metallurgy, Part I.
- (4) Materials Testing.
- (5) Fuels and Furnace.
- (6) Elements of Mineral Dressing.
- (7) Physics of Metal.
- (8) Applied Electricity, Part II.

Third Year Examination in Fuel Technology :

- (1) Thermodynamics and Chemical Kinetics.
- (2) Organic Chemistry.
- (3) Mineral Dressing.
- (4) Materials Testing.
- (5) Fluid Flow and Heat Transfer.
- (6) Coal and Carbonisation.
- (7) Applied Electricity, Part II.

Final Examination in Mining :

- (1) Mining, Part II (two papers).
- (2) Surveying, Part III.
- (3) Economics of Mining.
- (4) Applied Electricity, Part III.
- (5) Building Materials and Construction.
- (6) Thesis or Special paper for (non-Thesis students).

Final Examination in Metallurgy :

- (1) Physical Metallurgy, Part II.
- (2) Hydro and Electro-Metallurgy.
- (3) Non-ferrous Metallurgy.
- (4) Steel.
- (5) Industrial Economics and Organization.
- (6) Thesis or Special paper (for non-Thesis students).

Final Examination in Fuel Technology :

- (1) Petroleum Technology.
- (2) Gas Engineering.
- (3) Furnace Technology.
- (4) Boiler and Mechanical.
- (5) Industrial Economics and Organization.
- (6) Chemical Engineering.
- (7) Thesis or Special paper (non-Thesis students).

The College of Agriculture prepares students for B.Sc. (Ag.), M.Sc. (Ag.) degree courses and Doctorate. The qualifications for admission to these courses are as follows:—

(i) B.Sc. (Agriculture)**Three Year Course :**

Minimum qualifications for admission to First Year (Part I) Class :

- (1) Intermediate in Science with Biology, Physics and Chemistry
- or
- (2) Intermediate in Science with Botany or Zoology, Chemistry, Physics or Mathematics
- or
- (3) Intermediate in Science with Physics, Mathematics and Chemistry.

Those who have passed the Intermediate in Agriculture of Indian Universities (other than Nagpur) are eligible for admission in Part II, thus getting exemption of one year.

(ii) M.Sc. (Agriculture)

Two years course in the subjects of Plant Physiology, Plant Pathology, Agricultural Economics and Agronomy. Minimum qualification for admission to M.Sc. (Ag.) Class: B.Sc. (Ag.).

The subjects of the Part I Examination in Agriculture shall be the following:—

- (1) Agriculture (Tillage, Agric. Operations and Climatology).
- (2) Agriculture (Irrigation, Drainage and Manuring).

- (3) Animal Husbandry.
- (4) Agricultural Economics.
- (5) Agricultural Engineering (Mathematics and Surveying).
- (6) Agricultural Chemistry.
- (7) Agricultural Botany.
- (8) Agricultural Zoology.

The subjects of the Part II Examination in Agriculture shall be the following:—

- (1) Agriculture (Crops).
- (2) Animal Husbandry.
- (3) Agricultural Economics.
- (4) Agricultural Engineering.
- (5) Agricultural Chemistry.
- (6) Plant Pathology (Mycology).
- (7) Entomology.

The subjects of the Part III Examination in Agriculture shall be the following:—

- (1) Agriculture Farm (Management).
- (2) Agriculture (Crops and Experimental Technique).
- (3) Horticulture.
- (4) Genetics and Plant Breeding.
- (5) Agricultural Chemistry.
- (6) Plant Physiology.
- (7) Plant Pathology.

M.Sc. in Agriculture

A candidate for the M.Sc. Degree in Agriculture may be examined in any one of the following subjects:—

- (1) Plant Physiology.
- (2) Mycology and Plant Pathology.
- (3) Agronomy.
- (4) Agricultural Economics.

The subjects of Examination in Plant Physiology shall be the following:—

- (1) Fundamental Plant Physiology.
- (2) Applied Plant Physiology.

The subjects of Examination in Mycology shall be the following:—

- (1) Mycology.
- (2) Plant Pathology.
- (3) Micro-biology.

Doctor of Philosophy in Technology.—Students can work in the Faculty of Technology for the prescribed periods under the guidance of

some professor in this University, after passing, M.Sc., Tech. M.Sc., Agri., M.Pharm., B.Sc., Min., B.Sc. Met., B.Sc., Engineering Examinations of this University Residence during this period in the University is compulsory.

Doctor of Science in Technology

The degree is open

(1) to those who have obtained the Ph.D. degree in the Faculty of Technology not less than three academical years previous to the date of the submission of the thesis ;

(2) to those who have obtained the M.Sc. Tech., M.Sc. Agri., and M.Pharm. Degrees of this University not less than seven academical years previous to the date of supplication ;

(3) to teachers of this University who have obtained the Degrees mentioned in (2) above and have put in not less than six years' service in this University prior to the date of application.

Faculty of Law

LL.B.—The course of study extends to two years and is open to graduates of this or any other Indian University recognised by the Syndicate. There are two examinations, one at the end of the first year's course of study called the Previous Examinations and the other the Final Examination held at the end of the second year of study. For the Previous Examination a candidate is expected to have studied Constitutional Law and Constitutional History of India, Hindu Law, Mohamedan Law, the Law of Contracts and Sale of Goods, Law of Torts, Law of Companies Partnership and Negotiable Instruments, the Law of Crimes and Criminal Procedure. The subjects for the Final Examinations are : Principle of Equity with special reference to the Law of Trusts and Specific Relief, the Law relating to Transfer of Property and the Law of Easements, Jurisprudence, the Law relating to Land Tenures, Rent and Revenue and the Law of Evidence, the Law of Civil Procedure and Limitations, Comparative Ancient Law with special reference to Hindu Law, Public International Law.

LL.B. (Honours).—In addition to the above papers of the LL.B. Final Examination there will be extra two papers carrying 100 marks each for an Honours candidate. He must secure 50 Honours and not less than 60 per cent in the aggregate of all the papers including Honours papers.

The two papers are to be taken out of the following :—

- (1) Legal History.
- (2) Hindu Jurisprudence.
- (3) Private International Law.

LL.M.—The Master's Examination in Law is a two years' course. The subjects for the examination are as follows:—

- (1) Hindu Law (Two papers)
 - (2) Jurisprudence (Two papers)
- and any four of the following subjects:
- (1) Constitutional Law.
 - (2) Roman Law.
 - (3) Mohammedan Law.
 - (4) Legal History.
 - (5) Principles of Equity including Trusts and Specific Relief.
 - (6) Transfer of Property and Easements.
 - (7) Contracts.
 - (8) Mercantile Law.
 - (9) Private International Law.
 - (10) Public International Law.

Note.—In regard to an optional subject, while a candidate is required to have a competent knowledge of the subject, he will be required to possess a detailed knowledge of one of its branches to be selected by him. The examination in Hindu Law and Mohammedan Law is to comprise questions having special reference to the original authorities or translations thereof.

LL.D.—This is an examination chiefly by a thesis to be supplemented if necessary by an examination, oral, written or both. A candidate for this examination must have passed his LL.M. Examination at least one year before appearing for it.

Faculty of Medicine and Surgery (Ayurveda)

Ayurvedacharya, Bachelor of Medicine and Surgery:

No candidate shall be admitted to the degree of the Ayurvedacharya, Bachelor of Medicine and Surgery, unless he has passed the Intermediate Science Examination with Biology, Physics and Chemistry, Madhyama Sampurna Examinations with Admission or Matriculation Examination in English, the Intermediate Examination with Sanskrit (such a student shall have to pass an examination in Chemistry, Physics, Zoology and Botany). The duration of the course is five years during which the following examinations are held.

The courses of Ayurvedacharya, Bachelor of Medicine and Surgery:

1. First Professional Examination:

The First Professional Examination shall be held at the end of second year and will include the following subjects:—(i) Anatomy,

(ii) Physiology, (iii) Shareer (Dosh Dhalu Maladi Vijnana), (iv) Rasa Shastra with Bhaishajya Kalpana.

2. Second Professional Examination :

Second Professional Examination shall be held at the end of the third year and will include the following :

- (1) Materia Medica, (2) Dravya Guna.

3. Third Professional Examination, Part A will be held at the end of the fourth year and will include the following subjects :

- (1) Medical Jurisprudence Toxicology and Agad Tantra.
 (2) Hygiene and Swasthavirtta.
 (3) Charak Poorvardha.
 (4) Pathology and Bacteriology.
 (5) Midwifery and Gynaecology and Prasuti Tantra with Streeroga.

4. Third Professional Examination, Part B will be held at the end of the fifth year and shall include the following :

- (1) Surgery with Shalya Tantra.
 (2) Medicine including children's diseases and Kaumar-Bhartya.
 (3) E. N. T. and Ophthalmology with Shalakya Tantra.
 (4) Charak Uttarrardha.
 (5) Roga Vijnana and Kaya Chikitsa including Oushadhi Yoga Vijnan.

Recognition of Degrees and Diplomas of other Universities

Ordinarily the Entrance Examinations, Intermediate and Degree Examinations in Arts and Science of any Indian University or Board established by an Act of Legislature for the time being in force are recognised on a reciprocal basis.

SCALE OF FEES

A. Statement of Tuition Fees payable in eight instalments

College and Class	Fee Rs. A.
Sanskrit Mahavidyalaya .. .. .	..
Central Hindu College	
III & IV Yr.	110 0
V & VI Yr.	140 0
V & VI Yr. (for Girls only)	120 0
Research	125 0
(Payable in 3 instal.)	

<i>College and Class</i>	<i>Fee</i> <i>Rs. A.</i>
Central Hindu College (Kamachha Section)	
I & II Year each ..	80 0
Steno-typing	5 0
College of Indology	
V Yr.	140 0
VI Yr.	140 0
Women's Training College	
I Yr.	50 0
II Yr.	50 0
III Yr.	90 0
IV Yr.	90 0
Teachers' Training College	
B.Ed.	150 0
M.Ed.	200 0
College of Science	
I & II Yr. each ..	80 0
III & IV Yr. each ..	120 0
III & IV Yr. (for Girls only) each ..	100 0
V Yr.	145 0
V Yr. (for Girls only)	125 0
German or French	20 0
V Yr.	145 0
VI Yr. (for Girls only)	120 0
Research	125 0
(Payable in 3 instals.)	
Law College	
Previous	120 0
Final	120 0
LL.M.	150 0
(Payable in 3 instals.)	
College of Music & Fine Arts	
<i>Sangita</i> , Children below 12 years	
I & II Yr. each ..	36 0
Praveshika I & II Yr. each ..	72 0
Madhyama I & II Yr. each ..	96 0
Alankar I & II Yr. each ..	120 0
Acharya I & II Yr. each ..	144 0
Fine Arts I-IV Yr. each ..	72 0
Sculpture I-IV Yr. each ..	72 0

College and Class				Fee	Rs. A.
Engineering College					
I & II Yr.	..	..	.. each ..	230	0
III & IV Yr.	..	..	.. each ..	250	0
Research	..	..	.. ..	125	0
(Payable in 3 instals.)					
College of Mining & Metallurgy					
I & II Yr.	..	..	.. ..	220	0
III & IV Yr.	..	..	.. ..	240	0
Research	..	..	.. ..	125	0
(Payable in 3 instals.)					
College of Technology					
I-III Yr.	..	..	.. each ..	180	0
M.Sc. Glass or Ceramics	..	..	.. each ..	200	0
I-III Yr. Pharm.	..	..	.. each ..	180	0
M.Pharm. I Yr.	..	..	.. ..	200	0
M.Pharm. II Yr.	..	..	.. ..	60	0
(Payable in 3 instals.)					
III & IV Ind. Chem.	..	..	.. each ..	180	0
B.Sc. Chem. Eng. I & II Yr.	..	..	.. each ..	220	0
B.Sc. Chem. Eng. III & IV Yr.	..	..	.. each ..	240	0
Research	..	..	.. ..	125	0
(Payable in 3 instals.)					
V Yr. Ind. Chem.	..	..	.. ..	200	0
German or French	..	..	.. ..	20	0
VI Yr. Ind. Chem.	..	..	.. ..	200	0
Soap Dip.	..	..	.. ..	150	0
College of Agriculture					
B.Sc. Pt. I	..	..	.. ..	180	0
B.Sc. Pt. II	..	..	.. ..	180	0
B.Sc. Pt. III	..	..	.. ..	180	0
M.Sc. Prev.	..	..	.. ..	200	0
German or French	..	..	.. ..	20	0
M.Sc. Final	..	..	.. ..	200	0
Research	..	..	.. ..	125	0
(Payable in 3 instals.)					
College of Ayurveda					
I & II Yr. Praveshika	..	..	.. each ..	100	0
Purva Ayur	..	..	.. ..	100	0
I-V Yr. Ayur.	..	..	.. each ..	100	0
Library					
Diploma in Library Science	..	..	.. ..	90	0
(Payable in 3 instals.)					

<i>College and Class</i>	<i>Fee</i> <i>Rs. A.</i>
Diploma Course	
German I & II Yr. each ..	20 0
Psychiatry	80 0
Statistics	20 0
French I & II Yr. each ..	20 0
Hindi	10 0
Japanese I & II Yr. each ..	20 0
Chinese I & II Yr. each ..	20 0

B. Statement of Games Fee

Sanskrit Mahavidyalaya .. .. ..	..
Central Hindu College	6 0
Central Hindu College	7 0
(Kamachha Section)	
College of Indology	6 0
Women's College	4 0
Teachers' Training College	6 0
College of Science	8 0
Law College	6 0
College of Music & Fine Arts .. .. ..	..
Engineering College	
I Yr.	11 0
II-IV Yr. each ..	10 0
College of Mining & Metallurgy	
I Yr.	19 0
II-IV Yr. each ..	16 0
College of Technology	10 0
College of Agriculture	
Previous Yr.	11 0
Final Yr.	8 0
College of Ayurveda	6 12
Dip. in Library Science .. .. ..	..
Diploma course	6 0

C. Statement of Common Room Fee

Sanskrit Mahavidyalaya .. .. ..	..
Central Hindu College	1 0
Central Hindu College	1 8
(Kamachha Section)	
College of Indology	1 0
Women's College .. .. ..	..
Teachers' Training College .. .. ..	..
College of Science	2 8
Law College	1 0

<i>College and Class</i>	<i>Fee</i> <i>Rs. A.</i>
College of Music & Fine Arts .. .. .	..
Engineering College .. .. .	..
College of Mining & Metallurgy	4 0
College of Technology	2 0
College of Agriculture	1 0
College of Ayurveda .. .. .	.
Diploma in Library Science . . . . .	.
Diploma course	1 0

Research :—According to the fee charged in the College.

D. Statement of Medical Examination Fee

Sanskrit Mahavidyalaya .. .. .	..
Central Hindu College	1 0
Central Hindu College (Kamachha Section)	1 0
College of Indology	1 0
Women's College	2 8
Teachers' Training College	1 0
College of Science	1 0
Law College	1 0
College of Music & Fine Arts .. .. .	..
Engineering College	1 0
College of Mining & Metallurgy	1 0
College of Technology	1 0
College of Agriculture	1 0
College of Ayurveda	1 0
Dip. in Library Science	1 0
Diploma course	1 0

E. Statement of Admission Fee

Sanskrit Mahavidyalaya .. .. .	..
Central Hindu College	6 0
Central Hindu College (Kamachha Section)	6 0
College of Indology	6 0
Women's College	6 0
Teachers' Training College	6 0
College of Science	6 0
Law College	6 0
College of Music & Fine Arts	4 0
Engineering College	7 0
College of Mining & Metallurgy	6 0
College of Technology	6 0

<i>College and Class</i>	<i>Fee</i> <i>Rs. A.</i>
College of Agriculture	6 0
College of Ayurveda	2 0
Dip. in Library Science	3 0
Diploma Course	6 0

F. Statement of Laboratory Fee

Sanskrit Mahavidyalaya .. .. .	..
Central Hindu College	
III & IV Geog.	10 0
V & VI Geog.	16 0
Res. Geog.	50 0
Central Hindu College (Kamachha Section)	
Math.	10 0
Biology	20 0
College of Indology	
Women's College	
Science subjects	10 0
Teachers' Training College .. .. .	..
College of Science	
III & IV PM & PMG	20 0
III & IV Other Groups	30 0
V & VI (other than Math. students)	40 0
V & VI for Geog.	16 0
Research	50 0
Law College .. .. .	..
College of Music & Fine Arts .. .. .	..
Engineering College .. .. .	..
College of Mining & Metallurgy .. .. .	..
College of Technology	
B.Sc.	40 0
M.Sc., M.Pharm. Prev. & Res.	50 0
M.Pharm. Final	22 8
(For 3 instal.)	
College of Agriculture	
B.Sc.	40 0
M.Sc. & Research	50 0
College of Ayurveda	for each class — 15 0
Diploma in Library Science .. .. .	..
Diploma Course .. .. .	..

**G. Statement of Hostel Rent Single Seated, Double Seated and
Light charges (Payable in 8 instalments)**

College and Seat					Fee	
					Rs.	A.
Sanskrit Mahavidyalaya	..	.	.	.	..
Central Hindu College						
Single		..	..		100	0
Double	..	..	..		85	0
Central Hindu College (Kamachha Section)						
Single	..	..	..	.	100	0
Double	..	.	.		85	0
College of Indology						
Single		..	..	..	100	0
Double	..	..	..	..	85	0
Women's College						
Establishment	..	..	..	..	60	0
Light	..	..	..	..	25	0
Teachers' Training College						
Single	..	..	..	..	100	0
Double	..	..	..	.	85	0
College of Science						
Single	..	..	..	..	100	0
Double	..	..	..	..	85	0
Law College						
Single	..	..	..	..	100	0
Double	..	..	..	..	85	0
College of Music & Fine Arts						
Single	..	..	..	..	100	0
Double	..	..	..	..	85	0
Engineering College						
Single	..	..	..	..	100	0
Double	..	..	..	.	85	0
College of Mining & Metallurgy						
Single	..	..	..	..	100	0
Double	..	..	..	..	85	0
College of Technology						
Single	..	..	..	..	100	0
Double	..	..	..	..	85	0
College of Agriculture						
Single	..	..	..	..	100	0
Double	..	..	..	..	85	0

<i>College and Class</i>					<i>Fee</i>	
					Rs.	A.
College of Ayurveda						
Single	..	..	..	..	100	0
Double	..	..	..	..	85	0
Diploma in Library Science						
Single	..	..	..	..	100	0
Double	..	..	..	..	85	0
Diploma Course						
Single	..	..	..	..	100	0
Double	..	..	..	..	85	0

H. Statement of Caution Money Fee

Sanskrit Mahavidyalaya	..	..	..	..	..
Central Hindu College						
B.A.	..	..	..	..	20	0
M.A.	..	..	..	..	35	0
Research	..	..	..	..	40	0
Central Hindu College (Kamachha Section)	..	..	..	..	20	0
College of Indology						
M.A.	..	..	..	..	35	0
Research	..	..	..	..	40	0
Women's College	..	..	..	..	20	0
Teachers' Training College	..	..	..	..	35	0
College of Science						
B.Sc.	..	..	..	..	20	0
M.Sc.	..	..	..	..	35	0
Research	..	..	..	..	40	0
Law College	..	..	..	..	35	0
College of Music & Fine Arts						
Engineering College	..	..	..	..	35	0
Research	..	..	..	..	40	0
College of Mining & Metallurgy	..	..	..	..	35	0
Research	..	..	..	..	40	0
College of Technology						
B.Sc. Ind. Chem.	..	..	..	..	20	0
Other classes	..	..	..	..	35	0
Research	..	..	..	..	40	0
College of Agriculture	..	..	..	..	35	0
Research	..	..	..	..	45	0
College of Ayurveda	..	..	..	..	35	0
Diploma in Library Science	..	..	..	..	35	0

EXAMINATION FEES

Name of Examination					Fees
					including
					marks
					Rs. A.
Diploma Course	..	..	..	..	20 0
Admission	..	..	..	..	25 0
I.A., I.Com., & I.Sc.	..	..	..	..	30 0
B.A., B.Com., & B.Sc.	..	..	..	..	42 0
M.A., & M.Sc. (Previous)	..	..	..	..	32 0
M.A., & M.Sc. (Final)	..	..	..	..	32 0
for 8 papers	..	..	..	..	56 0
M.Com. (Previous)	..	..	..	..	25 0
M.Com. (Final)	..	..	..	..	36 0
I.Sc. (Eng.) Part I & II	..	..	..	..	32 0
B.Sc. (Eng.) Part I & II	..	..	..	..	32 0
I Yr. & II Yr. (Min. & Met.)	..	..	..	..	32 0
B.Sc. (Min. & Met.)	..	..	..	..	56 0
B.Sc. (Fuel Tech.)	..	..	..	..	56 0
LL.B. (Previous)	..	..	..	..	25 0
LL.B. (Final)	..	..	..	..	36 0
LL.M.	..	..	..	..	156 0
Ayurveda (Praveshika)	..	..	..	..	15 0
I Prof. (Ayurveda)	..	..	..	..	15 0
II Prof. (Ayurveda)	..	..	..	..	20 0
III Prof. (Ayurveda) Part A	..	..	..	..	25 0
III Prof. (Ayurveda) Part B	..	..	..	..	25 0
B.Sc. (Ag.) Part I, II & III	..	..	..	..	42 0
M.Sc. (Ag.)	..	..	..	..	56 0
B.Sc. (Glass and Ceramics) Part I	..	..	..	..	36 0
B.Sc. (Glass and Ceramics) Part II & III	..	..	..	..	42 0
B.Sc. (Chem. Eng.) Part I & II	..	..	..	..	32 0
B.Sc. (Chem. Eng.) Part III & IV	..	..	.. each	..	42 0
M.Sc. (Glass & Ceramics)	..	..	..	..	56 0
B.Pharm. Part I, II & III	..	..	..	..	42 0
M.Pharm.	..	..	..	..	56 0
B.Sc. (Ind. Chem.)	..	..	..	..	42 0
M.Sc. (Ind. Chem.) Prev. & Final	..	..	..	..	32 0
B.Ed.	..	..	..	..	42 0
M.Ed.	..	..	..	..	56 0
Sangeet Praveshika	..	..	..	..	25 0
„ Madhyama	..	..	..	..	36 0
„ Alankar	..	..	..	..	46 0
„ Acharya	..	..	..	..	56 0
Praveshika (Regular)	..	..	..	..	3 0

*Name of Examination**Fees
excluding
marks*

Rs. A.

Praveshika (Private)	..	..	..	..	4 0
Madhyama Part I, II & III	..	..	..	..	3 0
Shastri Part I, II & III	..	..	..	..	4 0
Sampurna Shastri	..	..	..	..	6 0
Acharya Part I, II & III	..	..	..	..	5 0
Sampurna Acharya	..	..	..	..	13 0
Paurohitya Examination Part I, II & III	..	..	..	..	3 0
Previous Examination in Sanskrit	..	..	..	..	3 0
Diploma in—					
Library Science	..	..	..	..	25 0
Soap Manufacture	..	..	..	..	36 0
German	..	..	..	..	15 0
French	..	..	..	..	15 0
Japanese	..	..	..	..	15 0
Chinese	..	..	..	..	15 0
Indian Philosophy & Culture	..	..	..	..	56 0
Clinical Psychology	..	..	..	..	32 0
Junior Painting	..	..	..	..	25 0
Senior Painting	..	..	..	..	25 0
Junior Sculpture	..	..	..	..	25 0
Senior Sculpture	..	..	..	..	25 0
Certificates in—					
Hindi	..	..	..	..	15 0
Bengali	..	..	..	..	15 0
Telugu	..	..	..	..	15 0
Gujarathi	..	..	..	..	15 0
Statistical Methods	..	..	..	..	12 0
Ph.D.	..	..	..	..	154 0
D.Sc.	..	..	..	..	154 0
D.Litt.	..	..	..	..	154 0

Note.—Rs. 10 is charged for Honours in each subject.

Rs. 5 is charged for special subject in B.Ed. Examination.

THE MAHARAJA SAYAJIRAO UNIVERSITY OF BARODA

INTRODUCTION

The University for Baroda came to be established only in April, 1949 but the idea was in the air ever since 1908 when it engaged the attention of the Government of Baroda and its educational advisers. As early as 1919 when the idea of Regional Universities and decentralisation of higher education to suit the educational and cultural needs of particular areas was new and had not taken root in this country, Maharaja Sir Sayajirao Gaekwad of Baroda appointed a committee in 1928 to consider the question of establishing a Civic University for Baroda. The report of the Committee could not be implemented owing to circumstances then prevailing. It was in 1947 that His Highness the Maharaja Sir Pratapsinh Gaekwad, appointed a committee under the Chairmanship of Sri K. M. Munshi to consider the question of an early establishment of a University at Baroda. The result was the Maharaja Sayajirao University of Baroda Act, 1949, and the inauguration of this University with His Highness the Maharaja of Baroda as the Chancellor.

INCORPORATION

The University named after the late illustrious ruler of Baroda, Sir Sayajirao Gaekwad, was incorporated on the 30th April, 1949, by an Act of the Baroda Legislature passed on the 26th April, 1949 before the integration of the Baroda State into the State of Bombay on the 1st May, 1949. The Government of Bombay had subsequently amended the Act mainly on the recommendations of the Senate of the University.

CHARACTER OF THE UNIVERSITY

The University is established and incorporated as a teaching and residential University at Baroda.

JURISDICTION

The University area comprises the limits of the city of Baroda and territories within a radius of 10 miles from the office of the University.

FACULTIES AND INSTITUTIONS OF THE UNIVERSITY

Faculty of Arts, Baroda College Building, Station Road, Baroda.

Faculty of Science, Golden Jubilee Science Institute, Station Road, Baroda.

Faculty of Education & Psychology, Station Road, Baroda.
 Faculty of Commerce, Baroda College Building, Station Road, Baroda.
 Faculty of Medicine, Medical College, Baroda (Administered by the Government of Bombay).
 Faculty of Technology and Engineering, Kalabhavan, Baroda.
 Faculty of Fine Arts, Pushpabag, University Road, Baroda.
 Faculty of Home Science, University Road, Baroda.
 Faculty of Social Work, University Road, Baroda.
 Oriental Institute, Record Tower Buildings, Kothi, Baroda.
 College of Indian Music, Dance and Dramatics, Opposite Sursagar, Shivaji Road, Baroda.
 Baroda Sanskrit Mahavidyalaya, Bank Road, Baroda.
 Intermediate College, Baroda College Compound, Baroda.

OFFICERS OF THE UNIVERSITY

Chancellor :

His Highness the Maharaja Gaekwad of Baroda.

Vice-Chancellor :

Shrimati Hansa Mehta, B.A. (Hons.), (Bom.).

Pro-Vice-Chancellor :

Dr. C. S. Patel, M.Sc. (Bom.), Ph.D. (Leeds).

DEANS OF FACULTIES

<i>Arts</i>	— Sri V. Y. Kantak, M.A. (Bom.).
<i>Science</i>	— Dr. N. M. Bhatt, M.Sc., LL.B. (Bom.), Ph.D. (Edin.), F.S.S.
<i>Education and Psychology</i>	— Professor T. K. N. Menon, B.A. (Madras), Dip. in Edu. (Leeds & Berlin), M.A. (Edu.) (Leeds).
<i>Commerce</i>	— Professor V. Y. Kolhatkar, M.Com. (Bom.), M.Sc. (Econ.) (London).
<i>Medicine</i>	— Dr. A. N. de Quadros, M.B.B.S. (Bom.), D.P.H. (London), F.R.C.S. (Eng.).
<i>Technology and Engineering</i>	— Professor D. Subbarao, B.E. (Civil) (Mysore), A.M.I.E. (India).
<i>Fine Arts</i>	— Professor Markand Bhatt, G.D. (Art) (Bom.), M.A. (Barnes Foundation).
<i>Home Science</i>	— Kumari Justina Singh, M.Sc. (Oregon and Kansas).

Social Work — Professor (Kumari) Parin Vakharia,
B.A. (Bom.), Dip. in S.S.A., M.S.
(Columbia), Ph.D. (New York).

Registrar :

Sri B. K. Zutshi, M.A., LL.B. (Luck.).

Librarian :

Dr. C. P. Shukla, M.A., B.T. (Bom.), M.A. (L.S.), Ph.D.
(Michigan).

Director, Oriental Institute :

Sri G. H. Bhatt, M.A. (Bom.).

Principal, College of Indian Music, Dance and Dramatics :

Sri R. C. Mehta, B.A. (Bom.).

Principal, Baroda Sanskrit Mahavidyalaya :

Sri H. C. Mehta, M.A., B.T. (Bom.).

Principal, Intermediate College :

Sri V. D. Salgaonkar, M.A., LL.B. (Bom.).

Principal, University Experimental School :

Sri K. S. Yagnik, M.A., B.T. (Bom.).

University Engineer :

Sri N. B. Patel, B.E. (Civil) (Bom.), A.M.I.E. (India).

Convener, Wardens' Committee :

Sri C. M. Shukla, M.A. (Bom.), B.A. (Hons.) (London).

Manager, M. S. University Press :

Sri R. J. Patel, B.A. (Bom.).

Superintendent, Physical Education :

Sri B. K. Naik, Dip. in Phy. Edu. (Madras), B.S. (P.E.), M.P.E.
(Massachusetts).

The Senate is the supreme governing body and authority of the University. The life of the first Senate nominated by Government came to an end on the 31st October, 1951. The Senate, as constituted under the Act, came into being from the 1st November, 1951.

The Syndicate is the Executive authority of the University. The term of office of the Syndicate which came into being from the 1st November, 1951 expired on the 31st October, 1954. The new Syndicate as constituted under the Act has come into being from the 1st November, 1954.

There are at present nine Faculties in the University :

1. Faculty of Arts.
2. Faculty of Science.

3. Faculty of Education & Psychology.
4. Faculty of Commerce.
5. Faculty of Medicine.
6. Faculty of Technology and Engineering.
7. Faculty of Fine Arts.
8. Faculty of Home Science.
9. Faculty of Social Work.

The Council of Post-Graduate Studies and Research consists of 11 ex-officio members and 5 teachers who are themselves doing Post-Graduate research or training.

BOARDS OF STUDIES

There are 34 Boards of Studies in the different Faculties.

I Faculty of Arts :

1. Sanskrit, Pali and Ardhamagadhi Languages and Literature.
2. Persian, Urdu and other Asian Languages and Literature.
3. Hindi Language and Literature.
4. Gujarati Language and Literature.
5. Marathi Language and Literature.
6. English Language and Literature.
7. Modern and Ancient European Languages and Literature.
8. Sociology.
9. History, Archaeology and Ancient Indian Culture.
10. Philosophy.

II. Faculty of Science :

1. Physics.
2. Chemistry.
3. Botany.
4. Zoology.
5. Bio-Chemistry.

III. Faculty of Education and Psychology :

1. Education.
2. Psychology.

IV. Faculty of Commerce :

1. Commerce including Business Organisation, Accountancy and Audit, Banking, Transport, Cotton Industry, etc.

V. Faculty of Medicine :

1. Anatomy and Physiology.
2. Pharmacology and Pathology.
3. Medicine, Surgery, Midwifery, etc.

VI. Faculty of Technology and Engineering :

1. Technology (Textile).
2. Engineering.

VII. Faculty of Fine Arts :

1. Painting, Sculpture and Applied Arts.
2. Architecture.
3. Music, Dancing and Dramatics.
4. Museology.

VIII. Faculty of Home Science :

1. Home Science.

IX. Faculty of Social Work :

1. Social Work.

X. Faculties of Arts, Science and Commerce :

1. Mathematics.
2. Statistics and Actuarial Science.
3. Geology and Geography.

XI. Faculties of Arts and Commerce :

1. Economics.
2. Politics and Administration.

Board of Accounts : There is a Board of Accounts consisting of three members of the Senate who are not in any way concerned with the administration of the University funds or other executive business of the University, elected every two years. The Board conducts test audit and submits its report on the accounts of the University and Endowment funds.

Number of students : The number of students including post-graduate students studying in various institutions on 1-7-1955 was as under :—

BARODA

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<i>S. No.</i>	<i>Name of the Institution</i>	<i>No. of students</i>		<i>Total</i>
		<i>Men</i>	<i>Women</i>	
1.	Faculty of Arts	Degree	285	73
		Post-graduate	82	17
				358
				99
				457
2.	Faculty of Science	Degree	979	78
		Post-graduate	57	3
				1,057
				60
				1,117
3.	Faculty of Education and Psychology	Post-graduate	115	26
		Diploma (T.D.)	30	4
				141
				34
				175
4.	Faculty of Commerce	Degree	187	3
		Post-graduate	15	—
		Post-graduate		
		Diploma	10	—
		Under-graduate		
		Diploma	42	—
				42
				257
5.	Faculty of Medicine	Degree	265	34
				299
6.	Faculty of Technology and Engineering	Degree	466	2
		Diploma	839	—
				839
				1,307
7	Faculty of Fine Arts	Degree	47	6
		Post-graduate :		
		(i) Degree	8	1
		(ii) Diploma	12	3
		Post-Diploma	4	1
		Diploma	11	3
				14
				96
8.	Faculty of Home Science	Degree	—	177
		Post-graduate	—	5
				177
				5
				182
9.	Faculty of Social Work	Post-graduate	35	7
		Degree	16	11
				42
10.	College of Indian Music, Dance and Dramatics	Post-graduate	1	4
		Diploma	302	146
				5
				448
				480

S. No.	Name of the Institution	No. of students		Total
		Men	Women	
11.	Intermediate College	655	141	796
12.	Sanskrit Mahavidyalaya			
	Acharya	7	—	7
	Shastri	4	—	4
	Visharad	35	—	35
				46

Free studentships, Scholarships & Medals: Each institution awards scholarships as per relevant Ordinances in the matter. They are classified as Merit, Post-graduate, Rural Economics and Technology. Free studentships are also awarded to poor and deserving students in each constituent institution to the extent of 15 per cent of the total strength, and subject to the Ordinances laid down therefor. There are also prizes and medals that are given from funds especially received for such awards. There are 63 funds from the interest of which scholarships and/or prizes are awarded as per conditions laid down. Wives, sons, unmarried and widowed daughters studying in degree and post-graduate classes in the Institutions managed by the University and who are wholly dependent on the permanent University employees drawing a salary of Rs. 250/- p.m. or less are exempted from paying tuition fees only.

Libraries, Laboratories and Gardens: Each of the constituent institutions maintains a library of its own. The Faculty of Science, the Faculty of Technology and Engineering and the Faculty of Home Science maintains the necessary laboratories and workshops. The Faculty of Science has a Botanical Garden attached to the Department of Botany of the Faculty.

Associations in the University: The Maharaja Sayajirao University Union was established in January, 1950. The aims and objects of the Union are (i) to stimulate interest in cultural and public affairs, (ii) to promote social intercourse amongst the students, (iii) to further the academic and social interest of students and (iv) to develop a sense of social service. It organises a University Week during which Inter-Faculty debates, Inter-Faculty Sports, Inter-Faculty competitions like Garba competition, Drama competition, Kavi Sammelan and entertainment programmes are arranged.

Common Reading Room: The Reading Room is furnished with Indian and foreign magazines in addition to some dailies and weeklies. Books for general reading are also kept in the Reading Room.

Games: Several indoor games like Carrom, Ping-Pong, etc. are provided. Tournaments are held and prizes are awarded to the winners.

Co-operative Stores : The University Union runs a Co-operative Store.

Social Service League : This body helps the poor students of the University with money and books and undertakes other social service activities.

UNESCO Club : There is a UNESCO Club under the University Union.

Students' Representative Councils : With a view to giving an opportunity to the students for discussing various problems concerning themselves, Students' Representative Councils are constituted in each of the Faculties and Institutions of the University during each academic year. For discussing problems concerning all the students of the University as a whole a University Students' Representative Council is constituted consisting of one elected representative of each Faculty and Institution during each academic year.

Residence and Cost of Living : There are at present eight halls of residence run by the University in which students are accommodated.

Since its establishment, the University has constructed four blocks of halls for men each costing about Rs. 6 lakhs. They are provided with all the modern facilities and provide accommodation to 538 students. These blocks are named (i) Sri Manubhai Mehta Hall, (ii) Maharshi Arvinda Hall, (iii) Dr. Jivraj Mehta Hall, and (iv) Professor T. K. Gajjar Hall. The new residency hostel has been named Sri Dadabhai Naoroji Hall. It accommodates 64 students. Besides these halls, there are two other buildings, Bungalow No. 11 and Keshava Prasad, which accommodate about 100 students. Each hall is under the charge of a teacher Warden. For day to day administration of the Halls, a Wardens' Committee is appointed under the Chairmanship of the Pro-Vice-Chancellor and one of the Wardens is appointed its Convener. A separate Hall for women named Srimati Sarojinidevi Hall with all the modern facilities has been constructed by the University at an estimated total cost of Rs. 8 lakhs. It provides accommodation for 200 women students. Over and above a teacher Warden, a House Keeper is appointed to help in the day to day work in this Hall. The hostel fee is fixed at Rs. 60 per term inclusive of electric charges. Students staying in the halls are also required to contribute Rs. 2 per term towards a general fund which is used for sports, amenities, petty repairs, etc. Two Committees (i) the Central Committee, and (ii) the Central Food Committee consisting of resident students are set up to train students to take interest in the general activities of the Halls and the food management. Average expenditure on messing comes to about Rs. 40 per month.

Two Honorary Medical Officers—one for men's Halls of Residence and the other for Srimati Sarojinidevi Hall of Residence for women—have been appointed by the University. They visit each Hall twice a week and give free medical advice to students.

Besides these halls of residence, the University has a Students' Home at Tara Niwas. Students who are not able to pay full fees of halls are given accommodation in the Home. They manage all the work regarding the Home.

STUDENTS INFORMATION BUREAU

The Assistant Registrar is the Secretary of the Bureau. Enquiries from students and teachers pertaining to admissions in foreign and Indian Universities for studies in Science and Technology, eligibility for admissions, exemptions and scholarships and courses open to under-graduates are attended to and the required information is given.

PROVIDENT FUND

The Syndicate of the University has laid down rules for the Provident Fund. Each employee of the University, eligible for admission to the Fund, is required to subscribe one anna per rupee of his monthly salary and the University has undertaken to contribute an equal sum. Such of the employees as were Baroda Government servants before integration and were entitled to pension, are also allowed to subscribe to the Fund on a non-contributory basis. The rate of interest is fixed at 3 per cent.

BUDGET

The total Revenue Budget expenditure for the year ending June, 1956 is expected to be Rs. 36,51,146 on the University Office, Faculties and Institutions as against the total budgetted income of Rs. 30,57,455 resulting in a deficit of Rs. 5,93,691.

PRESS

The University purchased a printing press in 1953. Most of the printing work of the University is done by the Press. It also stocks and supplies stationery and sundry articles for the use of the offices of the various Faculties and Institutions.

COURSES OF STUDY

The following courses are taught in the different Faculties under the University :—

<i>Name of the Faculty/ Institution.</i>	<i>Courses Taught.</i>
<i>Faculty of Arts :</i>	B.A., M.A. and Ph.D.
<i>Faculty of Science :</i>	B.Sc., M.Sc. and Ph.D.
<i>Faculty of Education and Psychology :</i>	B.Ed., M.Ed., Ph.D. and Diploma in Teaching.
<i>Faculty of Commerce :</i>	B.Com., M.Com. and Ph.D., Post-graduate Diploma in Banking, and Under-graduate Diploma in Co-operation.
<i>Faculty of Medicine :</i>	M.B B.S , M.D. and M.S.
<i>Faculty of Technology and Engineering :</i>	B E (Civil, Mech. and Electrical), B.Text. (Eng.), B.Text. (Tech.), B.Arch., and Diplomas in Civil, Mech. and Electrical Engineering and in Textile Technology and Textile Chemistry.
<i>Faculty of Fine Arts :</i>	B A. (Fine), M.A. (Fine), Post-Diploma and Diploma in Painting, Sculpture and Applied Arts and Post-graduate Diploma in Museology.
<i>Faculty of Home Science :</i>	B Sc. (Home) and M.Sc. (Home).
<i>Faculty of Social Work :</i>	M.S.W.
<i>Intermediate College :</i>	F Y Arts, Inter. Arts, F.Y.Com., and Inter. Commerce.
<i>College of Indian Music, Dance and Dramatics :</i>	B.Mus., M.Mus., and Diploma in Music (Vocal and Instrumental), Dance and Dramatics.
<i>Baroda Sanskrit Mahavidyalaya :</i>	Visharad (Diploma), Shastri (Degree), and Acharya (Post-graduate).

The following statement gives the duration of the course and the minimum qualifications required for admission to each of them :—

<i>Degree.</i>	<i>Minimum qualification required for admission.</i>	<i>Duration.</i>
B.A.	S.S.C. Examination of the Bombay State with at least 35% marks in the subjects prescribed under O. 157-A or any other examination recognised equivalent thereto.	Four Years.

<i>Degree.</i>	<i>Minimum qualification required for admission.</i>	<i>Duration.</i>
M.A.	B.A. degree of the University or a degree of another University recognised equivalent thereto.	Two Years.
B.Sc.	Same as in the case of B.A.	Four Years.
M.Sc.	B.Sc. degree of the University or a degree of another University recognised equivalent thereto.	Two Years.
T.D.	Matriculation Entrance or S.S.C. Examination or an examination recognised equivalent thereto and teaching experience of not less than 2 years in a School recognised by the Government	One Year.
OR		
	First year Examination in Arts, Science or Commerce of this University or the Intermediate Examination in Arts, Science or Commerce of any other University or an examination recognised equivalent thereto.	
B.Ed.	Bachelor's degree of this University or of any other University recognised equivalent thereto and teaching experience for 100 days.	One Year.
M.Ed.	B.Ed. degree of the University or a degree of another University recognised equivalent thereto.	By thesis — Two Years. By papers — One Year if full-time student. By papers — Two Years if part-time student.
B.Com.	Same as in the case of B.A.	Four Years.
M.Com.	B.Com. degree of the University or a degree recognised equivalent thereto.	Two Years (By papers or by thesis).

<i>Degree.</i>	<i>Minimum qualification required for admission.</i>	<i>Duration.</i>
Post-graduate Diploma in Banking.	B.A. degree with Economics or the B.Com. degree of this University or a degree of any other University recognised equivalent thereto.	One Year.
Under-graduate Diploma in Co-operation.	Intermediate examination in Arts, Science or Commerce of the University or of any other University recognised equivalent thereto	One Year.

OR

the S.S.C. examination of the S.S.C. Examination Board, Bombay State, or an examination recognised equivalent thereto and 3 years' practical experience in a Co-operative Institution after the passing of S.S.C. or an equivalent examination.

M B B S.	Examination in Mathematics at least of the standard of S.S.C. examination or that of the Matriculation or an equivalent examination of a Statutory Indian University	Five and a half years.
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AND

Intermediate examination in Science in the subjects of Physics, Chemistry (Inorganic and Organic) and Biology of the University or a recognised University or Board

AND

having attained the age of 17 years or shall be attaining the age of 17 years during his first term including the first day of the second term,

<i>Degree.</i>	<i>Minimum qualification required for admission.</i>	<i>Duration.</i>
M.D.	M.B.B.S. degree of this or of any University recognised by this University and must have passed the examination for the said degrees not less than two years previously.	Two Years including recognised appointments for one year.
M.S.	M.B.B.S. degree of this or of any University recognised by this University and must have passed the examination for the said degrees not less than two years previously.	Two Years including recognised appointments for one year.
Post-graduate Diplomas :	M.B.B.S. degree of this or of any University recognised by this University and must have passed the examination for the said degrees not less than twelve months previously.	
i) D.O.		i) 12 months.
ii) D.A.		ii) 12 months.
iii) D.L. & O.		iii) 9-12 „
iv) D.M.R. & E.		iv) 9-12 „
v) D.Ped.		v) 9-12 „
vi) D.V. & D.		vi) 9-12 „
vii) T.D.D.		vii) 12-18 „
viii) D.C.P.		viii) 12 months.
B.E. (Civil, Mech. and Elect.)	Intermediate Science examination of this University with Mathematics as optional subject or the Intermediate examination in Science of a University recognised by this University in the group of Mathematics, Physics and Chemistry or the Intermediate Arts examination with Mathematics as the optional subject and the B.A. examination with Physics and Chemistry as the optional group.	Three Years.

<i>Degree.</i>	<i>Minimum qualification required for admission.</i>	<i>Duration.</i>
B.Text. (Engr.) B.Text. (Tech.)	Same as in B.E. (Civil, Mechanical and Electrical).	Four Years.
B.Arch.	S.S.C. examination of the S.S.C. Examination Board, Bombay State, or an examination recognised equivalent thereto and must have studied Drawing upto the standard prescribed for Intermediate examination in Drawing of the Bombay Government.	Five Years.
Diplomas in Civil, Electrical and Mechanical Engineering and Textile Chemistry.	S.S.C. examination of the Bombay State or an examination recognised equivalent thereto.	Three Years.
Diploma in Textile Technology.	—do.—	Four Years.
B A (Fine).	S.S.C. examination of the Bombay State or an examination recognised equivalent thereto and aptitude test prescribed under Ordinance 157-C.	Four Years.
M A. (Fine).	B.A. (Fine) degree of the University.	Two Years.
Post-graduate Diploma in Museology.	Bachelor's degree of the University or of any University recognised by this University.	Two Years.
Post-Diplomas in Painting, Sculpture & Applied Arts.	Diplomas in the respective subjects of the University.	Two Years.
Under-graduate Diplomas in Painting, Sculpture and Applied Arts.	Same as in the case of B.A. (Fine).	Four Years.

<i>Degree.</i>	<i>Minimum qualification required for admission.</i>	<i>Duration.</i>
B.Sc. (Home).	S.S.C. examination of the Bombay State or an examination recognised equivalent thereto.	Four Years.
M.Sc. (Home).	B.Sc. (Home) degree of the University or of any University recognised by the University.	Two Years.
M.S.W.	Bachelor's degree of the University or of any University recognised by the University.	Two Years.
B.Mus.	Same as in the case of B.A. (Fine).	Four Years.
M.Mus.	B.Mus. examination of this University.	Two Years.
Diploma in Music (Vocal and Instrumental).	Same as in the case of B.A. (Fine).	Five Years
Diploma in : i) Dance. ii) Dramatics.	—do.—	Three Years.
Shastri.	B.A. with Sanskrit or Visharad Diploma examination or Tirth examination, Calcutta or Madhyama examination of the Government Sanskrit College, Banaras, and Banaras Hindu University or Shravan Mas Daxina examination, Baroda or examinations recognised equivalent thereto.	Two Years
Acharya.	M.A. examination with Sanskrit or Shastri examination of this University or Government Sanskrit College, Banaras or Uttama examination of Shravan Mas Daxina examinations or Visharad examination of the Tilak Maharashtra Vidyapith, Poona.	Two Years.

Visharad.	S.S.C. examination with Sanskrit or the third year examination of the Prathamkaksha of the Sanskrit Mahavidyalaya or the first examination of the Government Sanskrit College, Banaras or Banaras Hindu University or Madhyama examination of Calcutta or such other equivalent examinations recognised by the State Governments in India.	Five Years.
Ph.D.	Master's degree of the University or a degree of any other University recognised equivalent thereto.	Two-Four Years By thesis only.

RESEARCH WORK

The University has a separate fund for Post-graduate and research work. Every year the Syndicate appoint Research Assistants and students in the departments where research work is carried out.

The following are the important research projects being undertaken in the University :—

- (i) The Department of Gujarati which has undertaken to edit a series of Old Gujarati Texts published third volume—"Prachin Fagu Sangraha" during the year 1954-55.
- (ii) The Department of Archaeology has a plan of a systematic archaeological survey of Gujarat. It carries out excavations at selected places and the findings are published. The second volume under this series "Excavations at Timbarva" was published during the year 1954-55.
- (iii) The Department of Sociology is carrying on intensive field surveys of villages and tribal communities in different parts of India. In April, 1955 it received a grant of \$ 2,500 from the Chicago University, U.S.A., for conducting research work in a multi-caste village in Gujarat for which Barot records are available.
- (iv) The Oriental Institute has undertaken a scheme of editing and publishing a critical and illustrated edition of Valmiki

Ramayana at a cost of Rs. 8,25,000. The work of collation is in progress. A prospectus of the scheme, published during the year 1954-55 was warmly received by scholars in India, Europe and America.

- (v) A scheme of compilation of a cultural chronology of Gujarat from the earliest times upto the year of independence, 1947 A.D., in four volumes is also taken up by the University. The first volume is nearing completion.
- (vi) The Faculty of Education and Psychology has started work from April, 1954 on a scheme of research in Vocational and Educational Guidance as a part of the Government of India First Five Year Plan of Development of Secondary Education.
- (vii) The Faculty of Commerce commenced work of 'Enquiry into Rural Incomes and Savings in Gujarat' on behalf of the Research Programmes Committee, Planning Commission, Government of India. A grant of Rs. 50,050 is sanctioned by the Planning Commission for the scheme.
- (viii) The Trustees of the Sheth U.P. Ayurvedic College, Patna transferred a sum of Rs. 1.64 lakhs for establishing an Ayurveda Research Unit at Baroda. The University also set apart a sum of Rs. 5 lakhs for research in Ayurveda. An Ayurvedic Research Unit has been started and a building for the Ras-shala has been constructed. The following work is being done in the unit: (i) collation of Literary material for nine diseases, (ii) preparation of two forms for Prakriti Research in accordance with all major books in Ayurveda, and (iii) preparation of a comprehensive note on Roga-Rogi Parikshana and of a forment of Aturpariksha vidhana.

The following are the subjects in which Post-graduate and research facilities are available in the University :—

Faculty of Arts.

M.A.—1. English, 2. Gujarati, 3. Marathi, 4. Sanskrit, 5. Sociology, 6. History, 7. Philosophy, 8. Economics, 9. Persian, 10. Psychology, 11. Statistics, 12. Mathematics, and 13. Ancient Indian Culture and ahaology.

M.A. (Subordinate only)—1. Pali, 2. Urdu, and 3. Hindi.

Ph.D.—1. English, 2. Gujarati, 3. Marathi, 4. Sanskrit, 5. Sociology, 6. History, 7. Philosophy, 8. Economics, and 9. Ancient Indian Culture and Archaeology.

Faculty of Science.

M.Sc. 1. Mathematics, 2. Physics and Meteorology, 3. Chemistry, 4. Botany, 5. Zoology, 6. Statistics, and 7. Bio-Chemistry.

Ph.D.—1. Physics, 2. Chemistry, 3. Botany, and 4. Zoology.

Faculty of Education and Psychology.

M.Ed (By papers and dissertation) and *Ph.D.*—Education and Psychology.

Faculty of Commerce.

M.Com.—1. (a) International Banking and Foreign Exchange problems, (b) Corporation Finance, 2. (a) Economics of Agriculture with special reference to India, (b) Organised Industries with special reference to India, and 3. (a) Trade, (b) Transport.

Post-graduate Diploma.—Banking.

Faculty of Medicine.

M.D.—1. Medicine, 2. Pathology, 3. Pharmacology, 4. Physiology, and 5. Obstetrics and Gynaecology.

M.S.—1. Surgery, and 2. Anatomy.

M.Sc.—1. Anatomy, 2. Physiology, 3. Pharmacology, 4. Pathology, 5. Bacteriology, and 6. Parasitology.

Faculty of Fine Arts.

M.A. (Fine).—1. Painting, 2. Sculpture, 3. Applied Arts, 4. Art Education, and 5. Art Criticism.

Post-graduate Diploma.—Museology.

M.Mus.—Music — Vocal & Instrumental, Dance, Dramatics.

Faculty of Home Science

M.Sc. (Home) and *Ph.D.*—1. Foods and Nutrition, and 2. Child Development.

Faculty of Social Work.

M.S.W.—1. Social Science, 2. Social Work Philosophy, 3. Case Work, 4. Group Work, 5. Community Organisation, 6. Social Education, 7. Social Research, 8. Social Service Administration, 9. Psychiatric Social Work, 10. Medical Social Work, 11. Rural Social Work, 12. Industrial Relations, 13. Family and Child Welfare, 14. Juvenile Delinquency & Correctional Administration, 15. Public Welfare, and 16. Social Legislation.

SCALES OF FEES

The scales of tuition fees prescribed in the various institutions per term were as under:—

S. No.	Name of the Faculty/Institution	Tuition fees per term	Lab and/or practical fees per term	Remarks
		Rs.	Rs.	
1.	Faculty of Arts	90	..	For degree classes,
		60	..	For M.A. & Ph.D. classes.
2.	Faculty of Science	90	20	For F.Y. Sc.
		90	* 25	For Inter Sc.
		90	40	For B.Sc. classes,
		** 75	..	For M.Sc. and Ph.D. classes,
3.	Faculty of Education and Psychology	120		For B.Ed. classes.
		60	..	For T.D. classes
4.	Faculty of Commerce	25	..	For Diploma classes,
		100	.	For Degree classes,
		60		For Post-graduate degree classes,
		50	..	For Post-graduate Diploma courses,
5.	Faculty of Technology and Engineering	150	.	For degree classes,
		75	..	For Diploma classes,
6.	Faculty of Fine Arts	50	20	Both for Degree & Diploma classes.

* Rs. 20 for Mathematics group

** Rs. 60 for Mathematics group

S. No.	Name of the Faculty/Institution	Tuition fees per term	Lab and/or practical fees per term	Remarks
		30	20	For Post-graduate degree & Post-Diploma classes.
		50	..	For Post-graduate Diploma classes.
7.	Faculty of Home Science	50	20	For graduate classes.
		30	20	For Post-graduate classes.
8.	Faculty of Social Work	50	..	
9.	College of Indian Music Dance and Dramatics	Rs. 3 p.m.	First year	For Diploma Course in
		Rs. 4 p.m.	Second „	Vocal Music.
		Rs. 5 p.m.	Third „	
		Rs. 6 p.m.	Fourth & Fifth year	
		Rs. 4 p.m.	First year	For Diploma Course in
		Rs. 5 p.m.	Second „	Instrumental
		Rs. 6 p.m.	Third „	Music.
		Rs. 7 p.m.	Fourth & Fifth year	
		Rs. 7 p.m.	First, Second & Third year	For Diploma Course in Dance.
		Rs. 5 p.m.	First year	For Diploma Course in
		Rs. 6 p.m.	Second „	Dramatics.
		Rs. 7 p.m.	Third „	
		50	20	For Degree classes.
		30	20	For Post-graduate classes.

No tuition fees are charged in the Baroda Sanskrit Mahavidyalaya.

Over and above these fees, students are required to pay (i) Union fee of Rs. 5/ (ii) Gymkhana fee of Rs. 9/- and (iii) Medical Examination fee of Re. 1/- per year at the commencement of the first term. However students studying in undergraduate Diplomas in the Faculty of Commerce and the College of Indian Music, Dance and Dramatics are exempted from paying fees as mentioned in (i) and (ii) above.

FEEs FOR ADMISSION TO THE EXAMINATIONS

	Rs.	
1. Preparatory course in Arts, Science, Commerce *	.. 30	
2. I.A.	.. 30	
3. B.A. (Special & General)	.. 50	
4. M.A.	.. 100	
5. Visharad	.. 5	
6. Shastri	.. 8	
7. Acharya	.. 10	
8. Inter-Science	.. 40	
9. B.Sc. (Subsidiary)	.. 35	Rs. 75/- if taken together
10. B.Sc. (Principal)	.. 50	
11. M.Sc.	.. 100	
12. T.D. Part I	.. 15	
13. T. D. Part II	.. 10	
14. T.D. Part I & II	.. 25	
15. B.Ed. Part I	.. 15	
16. B.Ed. Part II	.. 15	
17. B.Ed. Part I & II	.. 30	
18. M.Ed.	.. 100	
19. I.Com.	.. 30	
20. B.Com.	.. 50	
21. M.Com.	.. 100	
22. First M.B.B.S.	.. 40	
23. Second M.B.B.S.	.. 20	

* Admission fee for the examination to be held in March, 1956 is Rs. 20/-.

	Rs.
24. Third M.B.B.S.	75
25. F.E. (Eng. & Text.)	40 each
26. S.E. (Eng. & Text. Eng. & Tech.)	40 each
27. T.E. (Text. Eng. & Tech.)	50 each
28. B.E. (C.M.E.)	100 each
29. B.Text. (Eng.) & B. (Text.) (Tech.)	100 each
30. F.Y. Diploma Examination in (CME)	25 each
31. S.Y. Diploma Examination in (CME)	30 each
32. Final Year Diploma Examination in **	40 each
Eng. Text. & Arch.	50
33. B.A. (Fine)	50
34. M.A. (Fine) (All branches)	100
35. M.A. Art Education	100
36. Post-diplomas	75
37. B.Mus.	50
38. M.Mus	100
39. Diplomas in Painting, Applied Arts, Sculpture	25 each
40. Diplomas in Music, Dance & Dramatics	15 each
41. Post-graduate Diploma in Museology	75
42. B.Sc. (Home)	50
43. M.Sc. (Home)	100
44. M.S.W.	100
45. Diploma in Co-operation	25
46. Post-graduate Diploma in Banking	100
47. Ph.D.	150

** Admission fee for the examination to be held in March-April, 1956 is Rs. 30/-.

RESULTS OF UNIVERSITY EXAMINATIONS 1955

S. No.	Examinations	No. of students appeared	No. of successful students
1	2	3	4
1.	F.Y. Arts	245	137
2.	Inter Arts	256	220
3.	B.A. (Special)	197	168
4.	B.A. (General)	6	5

S. No.	Examinations	No. of students appeared	No. of successful students
1	2	3	4
5.	M.A.	41	25
6.	Visharad	1	1
7.	Shastri	1	1
8.	Acharya	2	2
9.	F.Y. Science	438	319
10.	Inter Science	368	276
11.	B.Sc. (Principal)	196	150
12.	B.Sc. (Subsidiary)	172	134
13.	M.Sc.	40	31
14.	T.D.	31	31
15.	B.Ed.	104	100
16.	M.Ed. (by Papers)	10	9
17.	F.Y. Commerce	172	76
18.	(a) Inter Commerce	130	98
	(b) Inter Commerce (in Accountancy only)	19	11
19.	(a) B.Com.	68	47
	(b) B.Com. (In additional subjects only)	2	1
	(c) B.A. Students	15	3
20.	M.Com	5	4
21.	Diploma in Co-operation	19	18
22.	Post-graduate Diploma in Banking	11	7
23.	First M.B.B.S.	30	22
24.	Second M.B.B.S.	28	18
25.	Third M.B.B.S.	44	12
26.	F.E. (MET)	134	96
27.	S.E. (MET)	151	117
28.	B.E. (Civil)	35	31
29.	B.E. (Mechanical)	31	29
30.	B.E. (Electrical)	19	18
31.	Diploma in Mechanical Engineering	55	52

No. s.	Examinations	No of students appeared	No. of successful students
1	2	3	4
32.	Diploma in Electrical Engineering ..	66	55
33.	Diploma in Civil Engineering ..	61	51
34.	Diploma in Architecture ..	34	25
35.	Diploma in Weaving Technology ..	19	19
36.	Diploma in Textile Chemistry ..	19	19
37.	Diploma in Textile Technology (Transitory) ..	6	6
38.	Diploma in Music ..	15	10
39.	Diploma in Dance ..	6	6
40.	Diploma in Dramatics ..	3	3
41.	B.Mus. ..	4	3
42.	Diploma in Sculpture ..	1	1
43.	Diploma in Applied Arts ..	2	2
44.	B.A. Fine		
	(a) Painting ..	3	3
	(b) Sculpture ..	1	1
	(c) Applied Arts ..	1	1
45.	Post-graduate Diploma in Museology ..	7	6
46.	B.Sc. (Home) ..	24	24
47.	M.S.W. ..	23	20
48.	Ph.D (Economics) ..	3	2

BIHAR UNIVERSITY

The University of Bihar came into existence on the 2nd of January, 1952 under the Bihar University Act, 1951. The University of Bihar is, in fact, not a new University altogether, but the Old Patna University split into two under two names, viz.: (1) the Patna University, which has been designed as the Teaching-cum-Residential University and the University of Bihar as the Affiliating-cum-Teaching University by the State Legislatures.

The office of the University is located at Patna

The jurisdiction of the University extends all over the State of Bihar minus Patna proper as laid down in Section 3 of the Act.

CONSTITUTION OF THE UNIVERSITY

The University is governed in accordance with the provisions of the Bihar University Act, 1951. The Senate is the supreme governing body of the University. The executive power is vested in the Syndicate. The other authorities of the University are the faculties of Arts, Science, Commerce, Law, Medicine, Agriculture, Veterinary, Engineering, Education and Mines & Applied Geology, the Academic Council, the Boards of Studies in different faculties and such other bodies as the Senate may declare by Statutes to be the authorities of the University.

Officers of the University

Chancellor

- .. Sri R. R. Diwaker, M.A., B.L.,
Governor of Bihar.

Vice-Chancellor

- .. Sri Syamnandan Sahaya, M.P.

Treasurer

- .. Sri Rameshwar Prasad Singh,
M.L.C.

Registrar

- .. Sri P. Roy Chowdhury (Officiating).

Deans

- .. (1) Sri A. F. Markham, M.A.,
(Oxon.), (Arts).
.. (2) Dr. R. H. Richharia, Ph.D.
(Agriculture).
.. (3) Sri Kamleshwari Saran, M.Com.
(Commerce).

- .. (4) Sri D. L. Despande, M.Sc. (Engineering).
- .. (5) Vacant. (Education).
- .. (6) Dr. Madan Pd. (Medicine).
- .. (7) Sri Kishore Narayan, M.A., B.L. (Law).
- .. (8) Dr. S. P. Sinha, Ph.D. (Science).
- .. (9) Sri H. R. Kapoor, M.R.C.V.S. (Veterinary).
- (10) Dr. R. P. Sinha, Ph.D. (Mining and Applied Geology).

Controller of Examinations

- .. Sri Amarendra Narayan, M.Sc.

Deputy Registrar

- .. Vacant.

Assistant Registrar

- .. Sri D. P. Varma, M.A.

Inspector of Colleges

- .. (1) Dr. B. B. Majumdar, M.A., Ph.D.
- .. (2) Sri Phuldeo Sahay Verma, M.Sc.

There are 60 Colleges—Constituted and Affiliated—under the aegis of the Bihar University. A list is given below :—

COLLEGES MAINTAINED BY THE UNIVERSITY

- | | |
|---|---|
| 1. Langat Singh College, Muzaffarpur. | Principal—F. Rahman, B.A. (Lond.) |
| 2. Ranchi College, Ranchi .. | Principal—G. P. Dubey, M.Sc. (Cantab.) |
| 3. T. N. J. College, Bhagalpur (only the Post-graduate Department). | Prof. in charge—Dr. K. K. Basu, M.A., Ph.D. |

COLLEGES ADMITTED TO THE PRIVILEGES OF THE UNIVERSITY

(A) FIRST GRADE.

(i) *Technical and Professional Colleges*

- | | |
|---|-------------------------------------|
| 1. Bihar Agricultural Colleges, Sabour (Bagalpur). | Principal—R. H. Richharia, Ph.D. |
| 2. Bihar Institute of Technology, Sindri (Manbhum). | Principal—D. L. Deshpande, M.Sc. |
| 3. Bihar Veterinary College, Patna. | Principal—H. R. Kapoor, M.R. C.V.S. |

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|--|---|
| 4. Birla Institute of Technology, ..
Mesra, Ranchi. | Principal—M. C. Pandey. |
| 5. Chotanagpur Law College,
Ranchi. | Principal—S. K. Sahaya, Bar-at-Law. |
| 6. Darbhanga Medical College,
Darbhanga. | Principal—Dr. Madan Prasad. |
| 7. Ranchi Agricultural College,
Kanke, Ranchi. | Principal—Dr. H. N. Mukherji,
M.S., Ph.D. (Lond.). |
| 8. Indian School of Mines and
Applied Geology, Dhanbad. | Principal—R. P. Sinha, Ph.D. |
| 9. S. K. J. Law College,
Muzaffarpur. | Principal—Kishore Narayan,
M.A., B.L. |
| 10. Tirhut College of Engineer-
ing, Mazaffarpur. | Principal—B. Ojha. |

(ii) *Other First Grade Colleges*

- | | |
|---|--|
| 11. C. M. College, Darbhanga
(also teaching Law) | Principal—Dr. Sudhakar Jha,
M.A., Ph.D. (London). |
| 12. College of Commerce, Patna. | Principal—I. S. Jha, M.Com. |
| 13. D. A. V. College, Siwan .. | Principal—Vacant. |
| 14. Deoghar College, Deoghar
(S.P.). | Principal—K. N. Sahay, M.A. |
| 15. Gaya College, Gaya .. | Principal—K. S. Verma, Ph.D. |
| 16. G. D. College, Begusarai .. | Principal—S. N. Singh, M.A. |
| 17. H. D. Jain College, Arrah . | Principal—Vacant. |
| 18. J. K. College, Purulia .. | Principal—Anand Krishna Pd.,
M.A. |
| 19. Jamshedpur Co-operative
College, Jamshedpur. | Principal—Vacant. |
| 20. Koshi College, Khagaria .. | Principal—I. Dutta, Ph. D. |
| 21. M. D. D. Mahila College,
Muzaffarpur. | Principal—A. Sen, M.A. |
| 22. Marwari College, Bhagalpur. | Principal—B. N. Mukherji, M.A. |
| 23. Munshi Singh College, Moti-
hari. | Principal—K. P. Sinha, M.Sc. |
| 24. Nalanda College, Biharsarif. . | Principal—D. P. Srivastava, M.A. |
| 25. Purnea College, Purnea .. | Principal—J. P. Jha 'Dwij',
M.A. |

- | | |
|---|---|
| 26. R. D. & D. J. College,
Monghyr. | Principal—K. N. Singh 'Kapil',
M.A. |
| 27. Rajendra College, Chapra .. | Principal—M.P. Sinha, M.A. |
| 28. R. D. S. College, Muzaffar-
pur. | Principal—G. P. Singh, M.A. |
| 29. R. K. College, Madhubani .. | Principal—A. K. Dutta, M.A. |
| 30. Ranchi Women's College,
Ranchi. | Principal—Mrs. B. Prasad, M.A. |
| 31. S. R. K. Gocnka College,
Sitamarhi. | Principal—B. M. Mishra, M.A. |
| 32. S. Sinha College, Auranga-
bad. | Principal—Vacant. |
| 33. Samastipur College, Samasti-
pur. | Principal—C. Singh 'Kesari',
M.A. |
| 34. St. Columba's College,
Hazaribagh. | Principal—A. F. Markham, M.A.
(Oxon.). |
| 35. St. Xavier's College, Ranchi. | Principal—Rev. Father A.
Schockaert, S.J. |
| 36. S. Mahila Mahavidyalaya,
Bhagalpur. | Principal—Mrs. S. Vedalankar,
Ph.D. (Lond.). |
| 37. T. N. J. College, Bhagalpur
(also teaching Law). | Principal—J. Mishra, Ph.D. |

(B) AFFILIATED COLLEGES—SECOND GRADE

- | | |
|---|-------------------------------------|
| 38. A. N. S. College, Barh .. | Principal—S. P. Singh, M.A. |
| 39. Bettiah College, Bettiah .. | Principal—S. K. Dutta, M.A. |
| 40. Bindeshwar Singh College,
Dinapore, Patna. | Principal—P. K. Chowdhary,
M.Sc. |
| 41. Darshan Shah College,
Katihar. | Principal—B. N. Sinha, M.A. |
| 42. G. L. A. College, Daltonganj .. | Principal—J. N. Dixit, M.A. |
| 43. Giridih College, Giridih .. | Principal—B. N. Verma, M.Sc. |
| 44. Godda College, Godda .. | Principal—Vacant. |
| 45. Jagdam College, Chapra .. | Principal—B. N. Singh, M.Sc. |
| 46. Jai Prakash College, Nara-
yanpur. | Principal—R. B. Prasad, M.A. |
| 47. Maharaja R. R. Pd. Singh
College, Arrah. | Principal—Vacant. |

48. Murarka College, Sultanganj, Bhagalpur.	Principal—G. D . Chakravarty, M.A.
49. R. S. P. College, Jharia ..	Principal—S. K. Govind, M.A.
50. Raj Narain College, Hajipur.	Principal—N. C. Bhattacharya, M.A.
51. Sahebganj College, Sahebganj.	Principal—Sheobalak Roy, M.A.
52. Saharsa College, Saharsa ..	Principal—S. N. Sinha, M.A., B.L.
53. S. P. College, Dumka ..	Principal—S. P. Srivastava, M.Com.
54. S. P. Jain College, Sasaram..	Principal—K. Saran, M.Com.
55. Shrikrishna Ramruchi College, Barbigha (Monghyr).	Principal—R. S. N. Singh. M.A.
56. Swami Shajanand College, Jahanabad (Gaya).	Principal—C. N. Sharma, M.A.
57. Tata College, Chaibasa ..	Principal—K. S. Lal, M.A.
58. Thakur Prasad College, Madhepura, Saharsa.	Principal—R Chand, M.A.

The University holds the following examinations. Each of these is mentioned below with duration of studies and entrance qualification thereof :—

*The University Examination
and duration of courses*

Entrance qualification thereof.

- | | |
|---|--|
| <p>(1) Intermediate in Arts, Science and Commerce—
2 years.</p> <p>(2) Examination for the Degree of Bachelor of Arts, Science and Commerce—
2 years.</p> <p>(3) B.Sc. (Agriculture)—
3 years. One year for each B.Sc. (Agri.), Junior (1st year), Previous (2nd year), Final (3rd year).</p> | <p>After passing the Secondary School Certificate Examinations or any other examination as recognised by the Academic Council as equivalent thereto.</p> <p>After passing the corresponding lower examination.</p> <p>After passing the I.Sc. with Physics, Chemistry and one of the following subjects: Botany, Zoology, Biology or any other examination recognised by the Academic Council as equivalent thereto.</p> |
|---|--|

*The University Examination
and duration of courses.*

Entrance qualification thereof.

- (4) M.Sc. (Agri.)—2 years .. To be admitted a candidate must have taken the B.Sc. (Agri.) of this University, or passed some other examination recognised by the Academic Council as equivalent thereto not less than two academical years previously or a person employed in any research section of the Bihar Agricultural Department or any teacher of an Agricultural College.
- (5) B.Sc. (Eng.)—4 years . Shall be required to have passed I.Sc. of the Bihar University with Mathematics, Physics and Chemistry or any other examination recognised by the Academic Council.
- (6) M.A.—2 years .. To be admitted to the M.A. Examination a candidate must have (a) taken the B.A., B.Sc., or B.Com. degree or passed some other examination recognised by the Academic Council as equivalent thereto not less than two academic years previously. A B.Com. is admitted to the M.A. Examination in Economics or Labour and Social Welfare and B.Sc. unless he has passed the B.A. Examination in English and Vernacular Composition and in the subjects in which he wants to appear at the M.A. Examination.
- (7) M.Sc.—2 years .. To be admitted to this examination a candidate must have passed the (a) B.Sc. degree or some other examination recognised by the Academic Council as equivalent thereto not less than two academic years previously.
- (8) M.Com.—2 years .. Must have taken the B.Com. degree or passed some other examination recognised by the Academic Council as equivalent thereto not less than two academic years previously.
- (9) B.L.—2 years .. To be admitted a candidate must have passed the examination for the Bachelor's degree in any faculty or any other examination recognised by the Academic Council as equivalent thereto.

*The University Examination
and duration of courses.*

Entrance qualification thereof.

- | | |
|---|--|
| <p>(10) M.L. ..</p> <p>(11) (a) M.B.B.S. Examination—
5 years.
(b) Intermediate Examination—2 years.</p> <p>(12) (i) The final M.B.B.S.
Examination, Part I
—2 years.
(ii) The final M.B.B.S.
Examination,
Part II.</p> <p>(13) B.V. Science and Animal
Husbandry—4 years each
of 2 sessions.</p> <p>(14) B.Sc. (Mining)—4 acade-
mic years.</p> <p>(15) Ph.D. & D.Litt. ..</p> | <p>Any registered candidate, who has passed the B.L. Examination or some other examination recognised by the Academic Council as equivalent thereto may be examined for the degree of Master of Law two years after his graduation in Law.</p> <p>(a) I.Sc. of the Bihar University with Physics, Chemistry and Biology or some other examination recognised by the Academic Council as equivalent thereto.
(b) B.Sc. of a recognised University with Botany and Zoology, in addition to having passed in Physics and Chemistry either at the Intermediate or degree Examination.</p> <p>After passing the Intermediate M.B.B.S. Examination.
If a candidate since passing the Intermediate M.B.B.S. Examination has completed three years of a regular course of study, theoretical and practical and hospital practice in the subjects of the examination in a college admitted to this University up to the standard of the Final M.B.B.S. Examination.</p> <p>I.Sc. of the Bihar University or some other examination recognised by the Academic Council as equivalent thereto.</p> <p>I.Sc. with English, Mathematics, Physics and Chemistry.</p> <p>No regular teaching for the Ph.D. & D.Litt. degree is done. The examinations are however conducted on the basis of thesis and oral and practical examinations. Oral and practical examinations may not be necessary in the case, where the thesis has been recommended as highly excellent. Two years after Master's degree in the 1st Class or 2nd Class, the candidate may submit his thesis for the Ph.D. degree and five years after the Master's degree in the 1st Class or 2nd Class or three years after Ph.D. a candidate may submit his thesis for the D.Litt. degree. Permission in both the cases is given by the Research Board.</p> |
|---|--|

*The University Examination
and duration of courses.*

(16) M.S. & M.D. Examinations.

Entrance qualification thereof.

No regular teaching for the M.S. & M.D. Examinations also is done. The examinations are however conducted on the basis of thesis or case records. Candidates are eligible to appear at the aforesaid examinations two years after passing the M.B.B.S. Examination and after they have done House Surgeonship for one year after passing the M.B.B.S. Examination in the recognised college hospital.

POST-GRADUATE TEACHING

Subjects in which facilities for post-graduate teaching exist :

- (1) English, (2) Hindi, (3) Sanskrit, (4) History, (5) Economics, (6) Philosophy, (7) Psychology, (8) Mathematics, (9) Physics, (10) Chemistry, (11) Botany, (12) Zoology, (13) Anthropology, (14) Geography, (15) Political Science, (16) Commerce, (17) Agronomy, (18) Horticulture, (19) Plant Pathology, (20) Entomology and (21) Agricultural Extension.

Regulations have been amended with a view to include the teaching of Industrial Chemistry and Metallurgy at the Langat Singh College, Muzaffarpur.

RESEARCH INSTITUTES

The following are Research Institutes affiliated to this University :—

- (1) Nalanda Pali Institute, Nalanda.
(2) Mithila Research Institute, Darbhanga.

MANAGEMENT OF AFFILIATED COLLEGES

With a view to improve the management of affiliated institutions, the Senate has passed a Statute laying down the constitution of Governing Bodies. Each of these will consist of 11 members including the Principal, 2 representatives of the Teaching Staff, 1 University representative, 1 head of the administration of the area in which the College is situated, 1 Legislator, 1 representative of the Old Boys' Association, not more than three nominees of the donors of the institution and 1 co-opted member, preferably a lady from amongst the guardians of the students.

IMPROVEMENT IN THE EXAMINATION SYSTEM

For the Honours and the Post-graduate examinations in the Faculties of Arts, Science and Commerce, provision has been made for the appointment of two examiners in each paper. In case of difference of more than

15% in the marking between the two examiners, the case will be referred to the Board of Moderators whose decision will be final. The Board of Moderators have power to call for any answer paper.

NATIONAL CADET CORPS

Special care is taken for the organisation of National Cadet Corps. There are 14 units, 1 medical coy, 1 E M E and 4 girl sub-units working under the aegis of this University. They are distributed as under :—

2nd Bihar Bn. N.C.C., Muzaffarpur—3 coys.	L.S. College, R.D.S. College, Muzaffarpur and Rajendra College, Chapra.
3rd Bihar Bn. N.C.C., Ranchi—3 coys.	St. Xavier's College, Ranchi College, Ranchi, St. Columba's College, Hazaribagh, J. K. College, Purulia and Tata College, Chaibasa.
4th Bihar Bn. N.C.C., Bhagalpur—3 coys.	T.N.J. College, Marwari College, Bhagalpur and Agricultural College, Sabour.
5th Bihar Bn. N.C.C., Arrah—2 coys.	H. D. Jain College, Arrah.
1st Bihar Bn. N.C.C., Patna—1 coy.	Bihar Veterinary College, Patna.
Darbhanga Indep. Coy. N.C.C.—1 coy.	Darbhanga Medical College, Dar- bhanga.
Gaya Indep. Coy. N.C.C.— 1 coy.	Gaya College, Gaya.
10th Bihar Medical Coy. N.C.C., Darbhanga—1 coy.	Darbhanga Medical College, Dar- bhanga.
6th Bihar E.M.E. Sec. N.C.C., Sindri.	Bihar Institute of Technology, Sindri.
9th Bihar Sig. Sec. N.C.C., Ranchi.	Ranchi College, Ranchi.
2nd Bihar Girls' Troop N.C.C., Bhagalpur—1 sub- unit.	Sundarwati Mahila Maha Vidyalaya, Bhagalpur.
3rd Bihar Girls' Troop N.C.C., Ranchi,—2 sub- units.	Ranchi Women's College, Ranchi.
4th Bihar Girls' Troop N.C.C., Muzaffarpur—1 sub-unit.	M.D.D. Mahila College, Muzaffarpur.

A sum of Rs. 5,000 has been provided for N.C.C. in the budget.

RESEARCH FELLOWSHIP

A number of research fellowships has recently been instituted. The value of each fellowship is Rs. 2,400 per year payable in part at the end of every three months. A candidate, holding Master's Degree (Arts, Science and Commerce) in 1st Class or high 2nd Class is eligible for the fellowship. The fellowship is tenable for a period of two years to be extended, if considered advisable, up to one year more on the recommendation of the Supervisor. The candidate shall not be permitted to apply for any other job during the period from which he has been granted fellowship, unless the fellowship has been terminated under conditions laid down hereafter. The candidate, selected for fellowship, shall have to sign a bond clearly laying down that in case he wants to apply for any other job during the period of fellowship, his fellowship shall be terminated and he shall have to refund the amount spent on him as a research fellow either in a lump sum or suitable instalments as agreed upon between the University and the candidate. The candidate shall have to work under a professor of the University or under scholars of all-India repute teaching the subject approved by the Academic Council and if his work is not found satisfactory, the fellowship shall be terminated immediately and he will not be considered suitable for appointment as a lecturer in the University. The fellowship can also be terminated for any other reason considered valid and suitable by the Academic Council. If, however, the work of the candidate is satisfactory and he has been able to produce a decent paper at the end of the term and if he is offered a post of a lecturer inside the University, his initial salary will comprise the basic pay plus the amount of increment which might have been his due as a lecturer for the period he served as a research fellow.

UNIVERSITY LIBRARY

A Central Research Library is being organised by the University at Patna. At present it possesses 10,000 volumes on different subjects. The University spends Rs. 30,000 every year at present on books and journals. The University Grants Commission has sanctioned Rs. 70,000 uptil now for the purpose. The Library is open to teachers and students of the Post-graduate classes.

Shri B. N. Prosad, B.Sc., B.L., Dip. Lib. Sc., is working as Librarian.

SPORTS

The University has an Athletic Association with Sri Rameshwar Prasad Singh, Treasurer as Chairman and Professor P. B. Kuppaswamy of the Bihar Veterinary College as Secretary.

The Bihar University participated in the Inter-University Tournaments in various games and sports as detailed below :—

1953-54—(i) Cricket. (ii) Hockey and (iii) Tennis.

1954-55—(i) Foot-ball, (ii) Cricket, (iii) Hockey, (iv) Tennis, (v) Badminton and (vi) Athletic Sports.

There are at present 60 colleges under the Bihar University and the University runs its own Inter-College Tournaments every year in the month of December and University Crests and Certificates are awarded to the winning participants.

The Bihar University has taken advantage of the Government of India Scheme for training of coaches in different games. The following teacher-players of the University have been trained under the above scheme as expert coaches :—

Cricket	..	Prof. D. N. Sanyal, Ranchi College, Ranchi.
Foot-ball	..	Prof. K. D. Bannerji, T. N. J. College, Bhagalpur.
Hockey	..	Prof. P. C. Horo, St. Columba's College, Hazaribagh.

A stadium with a sports ground and a swimming pool have been provided at Patna.

A sum of Rs. 35,000 has been sanctioned for the purpose by the Central Government and Rs. 25,000 has been provided for by the University.

The colour of the University Athletic Association for games and sports is as follows :—

Shirts	..	Deep-red and yellow.
Blazer and Cap	..	Deep-red.
Number of teachers	..	1,227.
Number of students	..	39,672.

PROVISIONS FOR PRIVATE PERMISSION

The University Regulations permit candidates to appear as private candidates at various University Examinations, viz.: Intermediate Arts & Commerce, Bachelor Arts & Commerce and M.A. in subjects where no practicals are provided for only three academic years after they have passed the immediate lower examinations from this University or any recognised institutions. Girl candidates are however permitted to appear at the aforesaid examinations only two academic years after they have passed the immediate lower examinations as indicated above. Permission for B.L. Examination, Part I is given five years after passing the Bachelors' Examinations in any faculties and as for the B.L. Examination, Part II, one year after passing the B.L. Examination Part I. Candidates holding Master's degree are however permitted to appear at both the parts of the B.L. Examination simultaneously three years after they have passed the Master's Examination.

**Statement showing Grants received from the Government for the period from the 2nd January, 1952
to the 31st March, 1955.**

S.No.	Particulars	1951-52	1952-53	1953-54	1954-55
	(A) FROM THE STATE GOVERNMENT	Rs.	Rs.	Rs.	Rs.
1.	Statutory Grant	.. .. . 2,25,000	18,00,000 2,20,068	18,00,000	18,00,000
2.	Grant for increment in pay of staff employed in constituent and deficient grant colleges	.. .. . —	—	40,215	—
3.	Grant for Anthropology Department of the Ranchi College, Ranchi.	—	20,160	20,160	20,160
4.	Teaching of Philosophy (Hons.) in the L. S. College, Muzaffarpur.	—	—	2,600	—
5.	Teaching of Biology in the St. Columba's College, Hazaribagh.	—	47,091	17,591	17,591
6.	Grant for extension of the studentship to backward tribes and backward class students in colleges.	—	—	42,072	4,837
7.	Development grant for introducing Biology up to I.Sc. standard, B.A. (Hons.), B.Sc. (Hons.), M.Sc. teaching, Political Science, etc.	—	—	4,02,557	4,49,353 19,000
8.	For the construction of building of the Ranchi College	.. .. . —	—	3,00,000	—

S. No.	Particulars	1951-52	1952-53	1953-54	1954-55
		Rs.	Rs.	Rs.	Rs.
9.	Purchase of furnitures for the new Arts block and the new hostel at L. S. College, Muzaffarpur.			81,764	—
10.	Grant for construction of buildings, land acquisition, etc. for colleges under the Bihar University.	50,000	3,72,507	1,86,000	—
11.	Grant for the Commonwealth University Conference	—	—	5,000	—
12.	Grant for the U. N. S. Association	.. ..	—	100	—
13.	Grant for the H. D. Jain College, Arrah to meet deficit	24,982	—	—	—
14.	Grant for St. Xavier's College ..	.. ..	—	—	—
15.	Furniture for Ranchi College	.. ..	—	—	—
16.	On account of hire of water tank to fill the gas well of the Ranchi College laboratories.	212	—	—	—
17.	Purchase of apparatus and equipment for B.Sc classes and for purchase of astronomical apparatus for the Rajendra College, Chapra.	22,000	—	—	—
18.	On account of exemption of scheduled caste from payment of University examination fee.	6,000	—	—	4,000 12,000
19.	S.R.C grant to L. S. College, Muzaffarpur	.. ..	1,843 8	—	—

S. No.	Particulars	1951-52				1953-54				1954-55			
		Rs.				Rs.				Rs.			
20.	Purchase of furniture and equipment for L. S. College (B.Sc.).				19,300				—				—
21.	Extension of admission at the L. S. College up to B.A. (Hons.) in Philosophy.				3,100				—				—
22.	Outstanding liabilities of L. S. College and Ranchi College ..				68,917				—				—
23.	Ranchi College for gas and water fitting ..				9,683				—				—
24.	For stipends to poor students of the L. S. College ..				—				—			2,220	
25.	Government grant for Chotanagpur Law College ..				—				—			3,600	
26.	On account of leave salary to teachers ..				—				—			11,718	
27.	Extension of admission at the L. S. College ..				—				—			1,02,600	
28.	Towards various development scheme in the colleges under Bihar University.				—				—			6,90,610	
					—				—			1,00,000	
29.	Revision of pay of teaching departments of colleges ..				—				—			1,895	

S.No.	Particulars	1951-52	1952-53	1953-54	1954-55
		Rs.	Rs.	Rs.	Rs.
30.	For Political Science Conference .. .. .	..	—	—	3,000
31.	Library grant for the C. M. College .. .. .	..	—	—	20,000
32.	Furniture and equipment for the Bihar University .. .. .	..	—	—	40,000
	Total	.. 3,41,494	5,68,669/8	28,96,059	33,01,967
(B) FROM CENTRAL GOVERNMENT					
1.	Grant for French scholar .. .. .	..	—	3,379	2,250
2.	Book grant for the Bihar University Library (University Grants Commission).	—	—	—	30,000
3.	Do. do. .. .. .	..	—	—	2,50,000
4.	Equipments for Science Department (University Grants Commission).	—	—	—	20,000
	Grand total	.. 3,41,494	5,68,669/8	29,01,438	36,74,237

BOMBAY UNIVERSITY

INTRODUCTORY: CHARACTER OF THE UNIVERSITY

This University was established in 1857 ; but, until the passing of the Indian Universities Act of 1904, the Bombay University, in common with the others, was limited to the function of examining candidates and arranging for the courses of study which led up to their degrees. Under the Act of 1904, it acquired the right of organizing teaching, arranging for University extension lectures, and of publishing such works as were necessary for the direct educational work it was to carry on. By the Act of 1928, the constitution of the University was considerably altered. By reducing the proportion of the nominated to the elected members in the Senate, and by throwing open the door of the Senate to the representatives of a larger variety of interests, the new Act has ensured the independence of the University for all practical purposes, and made the University a more popular and representative institution than it ever was in the past. Under the new Act, the executive functions of the University are carried on by the Syndicate, and most of the academic work is looked after by the Academic Council.

Chiefly owing to lack of funds, the University was not able to undertake any new activities until 1912, when a liberal offer from the Government of India made it possible immediately to launch out in new directions. The Government of India offered to the University a non-recurring grant of five lakhs of rupees and a recurring grant of Rs. 45,000 for the purpose of developing its activities as a teaching body. As a result, in 1913-14, Sir Alfred Hopkinson of Manchester University was invited to India to advise as to possible and suitable lines of development and, in 1914, post-graduate lectures on the basis of the needs of the M.A. students were held for the first time. Since 1918-19, the scheme was somewhat modified and placed on Inter-Collegiate lines. The various colleges in Bombay arranged a considerable amount of post-graduate teaching, which was thrown open to qualified students of other colleges who were interested in the subjects or were working for the M.A. degree of the University. The University supplemented this teaching by arranging for a limited number of courses on its own account to deal with matters in which it seemed essential to provide training but which were not adequately covered by the courses provided by the colleges.

In 1922, a Committee was appointed to revise the scheme of post-graduate studies in the light of the experience gained with regard to its working since its inauguration. The Committee submitted its report in March, 1923, recommending that all post-graduate work should be undertaken under a centralized scheme by the University in co-operation with

its Colleges, and that the work, so far as Bombay was concerned, should be done as far as possible in the University buildings. As a result of the Committee's deliberations, a revised set of regulations relating to post-graduate studies was adopted by the Senate in August 1924. The revised scheme was tried for a couple of years, but proved unsatisfactory. Therefore, in December, 1926, the Syndicate appointed a Committee to consider the question in all its aspects and to draw up a comprehensive scheme of post-graduate teaching. The scheme prepared by this committee was laid before the Senate in July, 1927. As there was a divergence of opinion among the members of the Senate, in essentials, the Senate appointed a committee of its own to examine the scheme, and while the report of the committee was under the consideration of the Senate, the new University Act was passed and the whole question was therefore, left to be solved by the new Syndicate and by the Board of Post-Graduate Studies newly created by the Act. Now, the Board of Post-Graduate Studies practically controls the whole of post-graduate instruction and research in the University, including what is done in this direction in the colleges affiliated to the University and other post-graduate institutions.

One of the main ideas underlying the University Act of 1928 is that the University should directly conduct post-graduate teaching and research in all branches of learning and, with this view, the Act provides for the recognition of teachers in colleges as University Teachers for post-graduate instruction and research. A number of teachers from affiliated colleges and recognised post-graduate institutions are accordingly recognised for giving instruction to students preparing for examinations by papers, and for guiding research students. The need for undertaking direct post-graduate teaching by the University in post-graduate departments directly maintained by it has always been felt and though, owing to lack of funds, it has not been possible to do this in all branches of learning, the University today maintains the following post-graduate institutions of its own :—

1. The University School of Economics and Sociology (the newly instituted Department of Civics and Politics forms part of the School).
2. The University Department of Chemical Technology.
3. The University Department of Statistics.

As far as under graduate education is concerned, the University is an affiliating University.

Before the establishment of the University of Sind and of regional Universities in the Bombay State, the jurisdiction of the University extended over the whole of the former Provinces of Bombay and Sind. The University's jurisdiction is now confined to the limits of Greater Bombay.

The University was reconstituted by the Bombay University Act, 1953, consequent upon the establishment of other Universities as a measure in the decentralization and reorganization of University Education in the Bombay State. The new Act came into operation from the 1st June, 1953.

The special feature of the Bombay University Act, 1953, are as follows:—

- (1) Reconstitution of the University as a teaching and federal University. All affiliated colleges become constituent colleges.
- (2) Reduction in number of elections.
- (3) The strengthening of the academic element in the Senate, the Academic Council and Boards of Studies.
- (4) The creation of the Boards of University Teaching composed predominantly of the academic element and empowered to co-ordinate, control and regulate post-Intermediate and post-graduate, instruction, teaching and training in affiliated colleges and recognized institution and to make recommendations to the Syndicate for conducting such instruction, teaching and training in University colleges and institutions.
- (5) Extension of the powers of the University and its authorities by including activities like extra-mural teaching, University extension courses, training of students for competitive examinations for service under the Union and the State Governments, the establishment of an Employment Bureau, Students' Union and Board of Students' welfare and provision for recognition of institutions of research and specialized studies by the Syndicate.

The new Act makes a great advance over the Act of 1928 in the matter of the University's control over post-Intermediate instruction in the colleges. Under the Act of 1928, such control was distant and indirect. Under the new Act, the colleges become integral parts of a Federal University system and the University would be in a position to improve post-Intermediate instruction by husbanding the resources of the colleges, avoiding duplication and encouraging specialization. The University itself can, under the new Act, undertake post-Intermediate instruction in its own institutions, if necessary.

CONSTITUTION OF THE UNIVERSITY

* The University is governed in accordance with the provisions of the Bombay University Act, 1953. The executive government is vested in the Syndicate. The other authorities of the University are the

* For new University Act, please see Appendix A.

Faculties of Arts, Science, Technology, Law, Medicine and Commerce, the Academic Council, the Boards of University Teaching, Boards of Studies in the various Faculties and such other bodies as the Senate may declare by Status to be authorities of the University.

OFFICERS AND THE STAFF OF THE UNIVERSITY

The Chancellor

Dr. Harekrushna Mahtab, Governor of Bombay.

The Vice-Chancellor

Dr. John Matthai, B.A., B.L. (Madras), B.Litt. (Oxon.), D.Sc. (Lond.).

The Rector

S. R. Dongerkery, Esq., B.A., LL.B.

Deans

<i>In Arts</i>	Professor G. S. Ghurye, M.A., Ph.D. (Cantab.)
<i>In Science</i>	Professor A. N. Kothare, M.Sc. (Lond.).
<i>In Technology</i>	G. A. Kamtekar, Esq., B.A., B.Sc. (Bom), B.Sc. (Edin.), M.I.E.
<i>In Law</i>	The Hon Mr. Justice P. B. Gajendragadkar, M.A., LL.B.
<i>In Medicine</i>	Dr. S. J. Mehta, F.R.C.S.
<i>In Commerce</i>	Principal E. R. Dhongde, B.Com. (Lond.).


Syndicate

Dr. John Matthai, B.A., B.L. (Mad.), B.Litt. (Oxon.), D.Sc. (Lond.),
Vice-Chancellor, Taj Mahal Hotel, Room No. 551, Bombay-1.

S. R. Dongerkery, Esq., B.A., LL.B.,
Rector, Sital Mahal, Walkeshwar Road, Bombay-6

Sir Vithal N. Chandavarkar, Kt., M.A. (Cantab), Bar-at-Law,
41, Pedder Road, Bombay-26.

S. S. Bhandarkar, Esq., B.A. (Bom. & Lond.),
Director of Education, Poona-1.

 Professor G. S. Ghurye, M.A., Ph.D. (Cantab),
14th Road, Khar, Bombay-21.

The Hon. Mr. Justice P. B. Gajendragadkar, M.A., LL.B.,
C-11, Mafatlal Park, Warden Road, Bombay-26.

- Professor C. N. Vakil, M.A., M.Sc. (Econ.) (Lond.), F.S.S.,
University Hostel, 79, Queen's Road, Bombay-2.
- Diwan Bahadur K. M. Jhaveri, M.A., LL.B.,
1, Pitale Mansion, Kandewadi, Bombay-4.
- Principal L. N. Welchkar, B.Sc. (Econ.) (Lond.),
R. A. Podar College of Commerce & Economics,
Matunga, Bombay-19.
- Principal N. N. Murti, B.A., Ph.D. (Lond.), D.I.C.,
Principal's Quarters, Ramnarain Ruia College,
Napoo Road, Matunga, Bombay-19.
- Dr. V. R. Khanolkar, B.Sc., M.D. (Lond.), F.A.Sc., F.N.I.,
Director, Indian Cancer Research Centre, Parel, Bombay-12.
- Professor P. R. Awati, B.A. (Bom. & Cantab.), D.I.C., F.N.I.,
47/5, Prabhat Road, Poona-4.
- V. K. Joag, Esq., M.A.,
First Floor, 363 2, Shivaji Nagar, Poona-5.
- G. I. Patel, Esq., B.A.,
4, Walkeshwar Road. Bombay-6.
- A. Soares, Esq., M.A., LL.B.,
"Belvedere", Central Avenue, Chembur, Bombay.
- Professor G. D. Parikh, M.A.,
446, Sion Road, Matunga, Bombay-19.
- A. S. Sthalekar, Esq., M.Sc.,
Children's Academy, Vacchagandhi Road,
New Gamdevi, Bombay-7
- A. N. Namjoshi, Esq., M.Sc.,
Hanuman Terrace, Tara Temple Road,
Grant Road, Bombay-7.

Registrar

Mr. T V Chidambaram, B.A

Deputy Registrar

Mr. F. P. Soares, B.A.

Assistant Registrar

Mr. K. S. Kolge, B.A.

Librarian

Mr. D. N. Marshall, M.A., Dip. Lib.

TEACHING STAFF

(a) Department of Economics

- C. N. Vakil, M.A., M.Sc. (Econ. Lond.), F.S.S.,
Professor of Economics and Head of the Department of
Economics.
- D. T. Lakdawala, M.A., Ph.D.,
Ag. Professor of Economics.
- B. V. Krishnamurthy, M.A., Ph.D.,
Ag. Reader in Economics.
- P. R. Brahmananda, B.A., Ph.D.,
Lecturer in Economics.
- B. C. Desai, M.A.,
Lecturer in Economics.
- M. L. Dantwala, M.A.,
Reader in Agricultural Economics (on Deputation).
- M. B. Desai, M.Com., Ph.D.,
Ag. Reader in Agricultural Economics.
- K. N. Naik, M.A., Ph.D.,
Lecturer in Agricultural Economics.
- C. H. Shah, B.Com., Ph.D.,
Lecturer in Agricultural Economics.

(b) Department of Sociology

- G. S. Ghurye, Ph.D. (Cantab), M.A.,
Professor of Sociology and the Head of the Department of
Sociology.
- K. M. Kapadia, B.A., Ph.D.,
Reader in Sociology.
- A. R. Desai, B.A., Ph.D.,
Lecturer in Sociology.
- Miss P. H. Cabinetmaker, M.A., Ph.D.,
Lecturer in Sociology.

(c) Department of Civics and Politics

- K. P. Mukerji, M.A., B.L., D.Phil.,
Sir Pherozeshah Mehta Professor of Politics and Civics.
- Miss A. Dastur, M.A., Ph.D.,
Reader in Politics.
- R. Dwarkadas, M.A.,
Lecturer in Politics.
- Miss Usha Mehta, B.A., LL.B., Ph.D.,
Edwin Montague Lecturer in Politics.

UNIVERSITY DEPARTMENT OF CHEMICAL
TECHNOLOGY

*Mody Professor of Chemical Technology and Director of
the Department*

Dr. K. Venkataraman, M.A. (Madras), M.Sc. (Tech.), Ph.D., D.Sc.
(Manch.), F.R.I.C., F.N.I.

Professor of Dyestuff Technology

B. D. Tilak, D.Phil. (Oxon.), B.Sc. (Tech.), Ph.D.

Professor of Textile Chemistry

G. M. Nabar, Ph.D. (Manch.), B.A., M.Sc., M.Sc. (Tech.), F.R.I.C.,
F.T.I.

Professor of Chemical Engineering

G. P. Kane, M.Sc. (Bom.), Ph.D. (Lond.), D.I.C. (Now with the
Government of India).

Singhanee Reader in Chemical Engineering

S. M. Shah, Ph.D. (Lond.), B.Sc. (Tech.), D.I.C.

Sir Homi Mehta Reader in Oils, Fats and Soaps

J. G. Kane, M.Sc. (Bom.), Ph.D. (Wisconsin).

Sir Dorabjee Tata Reader in Pharmaceutical Chemistry

M. L. Khorana, B.Sc. (Pharm.), M.S. (Minch.).

Sir Homi Mehta Reader in Plastics, Paints and Varnishes

N. R. Kamath, B.Sc. (Tech.).

Reader in Colour Chemistry

S. V. Sunthankar, B.Sc. (Tech.), Ph.D.

Professor of Food Technology

A. Srinivasan, M.A., D.Sc. (Madras), F.R.I.C.

Singhanee Reader in General Engineering

M. V. Joshi, B.E. (Bom.), B.Sc. (Tech.) (Manch.).

Singhanee Lecturer in Colour Physics

M. R. Padhye, M.Sc., Ph.D.

Singhanee Lecturer in Fuel Technology

S. B. Pandya, B.Sc., M.Sc. (Tech.).

Singhanee Lecturer in Pharmacy

Mrs. Manik R. Baichwal, B.Sc., M.Sc. (Tech.).

Lecturer in Inorganic and Physical Chemistry

B. N. Ghosh, M.Sc., Ph.D. (Leeds).

Lecturer in Chemistry of Oils

D. Rebello, Ph D. (Pitt), B.Sc. (Tech.).

Reader in Dyeing and Printing

E. H. Daruwala, B.Sc., M.Sc. (Tech.), Ph.D. (Manch.).

Lecturer in Pharmacology

Rajaram Rao, M.B., B.S.

Lecturer in Applied Mathematics

D. K. Sen, M Sc., Ph.D.

DEPARTMENT OF STATISTICS

M. C. Chakrabarti, M Sc. (Dacca),

Reader in Statistics and Head of the Department.

K. S. Rao, M.A. (Andhra),

Lecturer in Statistics.

A M Kshirsagar, M Sc.,

Lecturer in Statistics.

K. C. Chanda, M.Sc. (Cal.),

Lecturer in Statistics.

AFFILIATED COLLEGES AND THEIR STAFF

SCIENCE COLLEGE

Institute of Science, Bombay-1

Director—F. R. Bharucha, D.Sc. (Montepellier), B.A., F.N.I.

ARTS AND SCIENCE COLLEGES

Elphinstone College, Bombay-1

Principal—Nayer L. Ahmad, M.A., B.Litt. (Oxon.).

St. Xavier's College, Bombay-1

Principal—Rev. Father M. M. Balaguer, S.J., D.D. Greg., Ph.D. Greg.
Ph.D. (Lond.).

Wilson College, Bombay-7

Principal—Rev. Dr. James Kellock, M.A., D.D. (Glas.).

Ismail Yusuf College, Jogeshwari

Principal—G. C. Bannerjee, M.A.

Ramnarain Ruia College, Matunga, Bombay-19

Principal—Dr. N. N. Murti, B.A. (Madras), Ph.D. (Lond.), D.F.C.

Khalsa College, Matunga, Bombay-19

Principal—G. S. Bal, M.Sc. (Punjab),

Sophia College, Bombay-26

Principal—Rev. Mother W. Ward, B.A. (Lond.), M.A. (Oxon.).

Siddharth College of Arts and Science, Bombay-1

Principal—V. S. Patankar, M.Sc., Ph. D.

*Megji Mathradas Arts College, Chowpatty and
Narondas Manordas Science Institute, Andheri*

Principal—Dr. R. D. Adatia, M.Sc., Ph.D.

Rishi Dayram and Seth Hassaram National College, Bandra

Principal—N. B. Butani, M.A., B.Sc.

Jai Hind College, Bombay-1

Principal—T. M. Advani, M.A., LL.B.

Ruparel College, Bombay-16

Principal—C. B. Joshi, B.A. (Cantab.), M.A.

Kishinchand Chellaram College, Bombay-1

Principal K. M. Kundnani, M.Sc.

Bombay College, Bombay-28

Principal—M. G. Bhate, M.A., B.Sc. (Econ.) (Lond.).

COMMERCE COLLEGES

Sydenham College of Commerce and Economics, Bombay-1

Principal—E. R. Dhongde, B.A., B.Com. (Lond.).

R. A. Podar College of Commerce and Economics, Bombay-19

Principal—L. N. Welinkar, B.Sc. (Econ.) (Lond.).

Siddharth College of Commerce and Economics, Bombay-1

Principal—J. C. Bahl, B.A., B.Com.

TRAINING COLLEGES

Secondary Training College, Bombay-1

Principal—Miss Sulabha S. Panandikar, M.A., M.Litt (Camb.).

St. Xavier's Institute of Education, Bombay-1

Principal—Rev. A. Solagran, S.J., Ph.D., D.D.

ENGINEERING AND TEXTILE COLLEGE

Victoria Jubilee Technical Institute, Matunga, Bombay-19

Principal—

VETERINARY COLLEGE

Bombay Veterinary College, Parel, Bombay-12

Principal—F. S. Khambata, B.Ag., G.B.V.C., M.Sc., Ph.D.

COLLEGE OF ARCHITECTURE

Dean—Mr. J. D. Gondhalekar

LAW COLLEGES

Government Law College, Bombay-1

Principal—K. R. Mehta, B.A., LL.B.

The New Law College, Bombay-16

Principal—S. G. Chitale, M.A., LL.B.

Law College, Bombay-1

Principal—M. S. Shahani, M.A. (Oxon.), Bar-at-Law.

MEDICAL COLLEGES

Grant Medical College, Bombay-8

Principal—D. P. Sethna, F.R.C.S.E.

Seth G. S. Medical College, Bombay-12

Dean—Dr. S. G. Vengsarkar, M.D., F.C.P.S.

Topiwala National Medical College, Bombay-8

Offg. Dean—Dr. L. Monteiro, M.D.

Sir C. E. M. Dental College, Bombay-8

Principal—K. L. Shourie, B.Sc., M.B., B.S., M.D.S., M.Sc., Ph.D.

Nair Hospital Dental College, Bombay-8

Dean—Dr. V. M. Desai, D.D.S., F.D.S., R.C.S., F.I.C.D.

NUMBER OF STUDENTS IN THE UNIVERSITY DEPARTMENTS
AND AFFILIATED COLLEGES

Name of the College.	1952-53 As on 31st March 1953	1953-54 As on 31st March 1954	1954-55 As on 31st March 1955
1. University School of Economics and Sciology, Bombay.	420	444	435
2. University Department of Chemi- cal Technology, Matunga, Bombay-19.	363	351	355
3. University Department of Statis- tics, Bombay-1.	47	45	47
4. Institute of Science, Bombay	403	411	426
5. Elphinstone College, Bombay	928	950	951
6. St. Xavier's College, Bombay	2,803	2,786	2,762
7. Wilson College, Bombay-7	1,518	1,519	1,525
8. Ismail Yusuf College, Bombay	444	557	621
9. Ramnarain Ruia College, Matunga, Bombay-19.	2,880	2,864	2,945
10. Khalsa College, Matunga, Bombay-19.	1,876	1,957	1,780
11. Sophia College, Bombay-26	454	563	584
12. Siddharth College of Arts and Science, Bombay-1.	2,934	2,940	2,942
13. Jai Hind College, Bombay-1 ..	2,412	2,508	2,545
14. Bhavan's College, Bombay-7 ..	596	438	778
15. Ruparel College, Bombay-16 ..	1,242	2,078	2,342
16. Kishinchand Chellaram College, Bombay.	—	—	1,532
17. Bombay College, Bombay-28 ..	—	—	272

Name of the College.	1952-53 As on 31st March 1953	1953-54 As on 31st March 1954	1954-55 As on 31st March 1955
18. Sydenham College of Commerce and Economics, Bombay-1.	1,193	1,286	1,373
19. R. A. Podar College of Commerce, and Economics, Bombay-19.	1,193	1,147	1,159
20. Siddharth College of Commerce and Economics, Bombay-1.	—	181	368
21. Secondary Training College, Bombay-1.	104	103	143
22. St. Xavier's Institute of Education, Bombay-1.	—	50	50
23. V. J. Technical Institute, Matunga, Bombay-19.	301	453	396
24. Sir J. J. School of Art, Bombay	55	109	159
25. R. D. & S. H. National College, Bandra.	1,552	1,723	983
26. Bombay Veterinary College, Parel, Bombay-12.	153	188	195
27. Government Law College, Bombay.	962	1,674	1663
28. New Law College, Bombay-16	—	—	469
29. Law College, Bombay-1	—	—	—
30. Grant Medical College, Bombay-8.	873	879	818
31. Seth G. S. Medical College, Bombay-12.	561	635	666
32. Topiwala National Medical College, Bombay-8.	383	421	413
33. Sir C. E. M. Dental College, Bombay-8.	85	102	125
34. Nair Hospital Dental College, Bombay-8.	—	—	55

NUMBER OF SUCCESSFUL CANDIDATES AT VARIOUS
UNIVERSITY EXAMINATIONS

Examination.	1952-53	1953-54	1954-55
Intermediate Examination in Arts	1,767	2,215	2,862
B.A. (Special)	1,518	1,562	1,554
B.A. (General)	110	60	52
M.A. (Papers)	231	293	277
M.A. (Thesis)	6	3	2
B.T.	102	143	151
T.D.	121	134	142
M.Ed. (Papers)	16	31	23
M.Ed. (Thesis)	3	4	—
Intermediate Examination in Commerce	332	533	724
B.Com.	347	330	456
M.Com. (Papers)	44	49	36
M.Com. (Thesis)	2	1	—
Ph.D. (Arts)	28	21	19
Ph.D. (Science)	22	35	25
D.Litt.	—	—	—
Dip Lib.	22	15	13
Intermediate Examination in Science	1,754	2,220	2,211
B.Sc. (Subsidiary) held in October	147	164	179
B.Sc. (Principal and Subsidiary) held in April	* 968 * 812	* 991 * 957	* 1,041 * 1,032
M.Sc. (Mathematics)	23	35	31
M.Sc. (Physics)	10	12	10
M.Sc. (Chemistry)	15	30	15
M.Sc. (Botany)	7	3	7
M.Sc. (Zoology)	13	12	13
M.Sc. (Zoology) (partly by thesis and partly by papers)	—	2	—
M.Sc. (Thesis)	49	60	59
Ph.D. (Translation Test)	14	28	21
F.E.	97	80	104
S.E. (Civil) (Old)	22	—	—
S.E. (Civil) (New)	21	41	43
S.E. (M. & E.) (Old)	33	—	—
S.E. (Mechanical) (New)	20	32	35
S.E. (Electrical) (New)	17	25	27

* Qualified for the degree of B.Sc.

** Passed in Subsidiary Subject only.

Examination.	1952-53	1953-54	1954-55
B.E. (Civil) (Old)	2	28	—
B.E. (Civil) Part I (Old)	1	5	—
B.E. (Civil) (New)	—	25	50
B.E. (M. & E.) (Old)	57	66	6
B.E. (M. & E.) (Old) Part I only	61	11	—
B.E. (Mechanical) (New) Part I only	—	3	33
B.E. (Mechanical) (New)	—	19	39
B.E. (Electrical) (New)	—	16	25
B.E. (Electrical) (New) Part I only	—	—	26
M.E.	—	2	—
B.Sc. (Tech.)	111	94	103
M.Sc. (Tech.) (By Thesis)	15	12	12
F.Y. Chem. Eng.	26	20	18
S.Y. Chem. Eng.	15	16	15
T.Y. Chem. Eng.	—	14	14
B. Chem. Eng.	—	—	13
Inter. Text	22	13	18
Third B. Text	10	15	22
B. Text	17	11	25
F.Sc. (Vet.)	51	53	55
S.Sc. (Vet.)	33	42	62
B.Sc. (Vet.)	36	47	36
M.Sc. (Agri.) (Thesis)	—	4	2
Law Preliminary	54	80	135
1st LL.B. (Old)	319	94	—
1st LL.B. (New)	127	520	644
Second LL.B.	251	338	184
Second LL.B. (New)	—	70	268
LL.M. (Papers)	2	4	1
LL.M. (Thesis)	1	—	—
1st M.B.B.S.	256	265	335
2nd M.B.B.S.	228	382	260
3rd M.B.B.S.	241	246	325
M.D. (Old)	48	—	—
M.S. (Old)	14	—	—
M.D. Part I	83	56	62
M.S. Part I	19	38	30
M.D. Part II	—	13	* 24

* Qualified for the B.E. degree.

B.E. (Civil) (Old), B.E. (Mech. & Elec.) (Old), B.E. (Mechanical) (New) and B.E. (Electrical) (New) examinations consist of two parts—Part I and Part II.

Examination.	1952-53	1953-54	1954-55
M.S. Part II	—	* 10	* 16
D.M.R.E. Part I	5	1	3
D.M.R.E.	6	* 8	* 2
D.P.H. Part I	4	4	5
D.P.H. Part II	* 2	* 4	* 5
D.A.	4	10	7
D.O.	4	1	1
D. Ped.	2	—	—
D.V. & D.	6	1	5
T.D.D.	2	—	—
D.P.M. Part I	—	2	4
D.P.M. Part II	—	* 6	* 2
B.Sc. (Medical)	6	6	3
M.Sc. (Medical)	—	—	2
1st B.D.S. (Old)	19	22	14
Final B.D.S. (Old)	16	19	14
First B.D.S. (New)	—	16	38
Second B.D.S. (New)	—	2	9
Third B.D.S. (New)	—	1	1
Final B.D.S. (New)	—	1	1

Qualified for the Degree/Diploma.

M.D. & M.S. degrees and D.M.R.E., D.P.H. & D.P.M. diploma examinations consist of two parts—Part I and Part II.

SCHOLARSHIPS AND MEDALS

A large number of Endowed Scholarships and Medals is awarded by the University for distinguished proficiency in the several examinations, and each of the affiliated Colleges also awards its own Scholarships and Medals. The University Endowment Fund for Scholarships, Prizes and Medals amount to Rs. 87,98,800 invested in Government Securities and Port Trust and Municipal Bonds.

LIBRARY, LABORATORIES, ETC.

The University Library, which is under the control of the Library Committee, is open to Fellows of the University, Principals and Professors of Colleges affiliated to the University of Bombay, the University Staff, Graduates of the University, students of affiliated colleges and such other persons as are admitted by a special order. The Library has over 120,000 volumes. The University Departments of Economics and Sociology and Chemical Technology also maintain libraries of their own, which are

growing substantially every year and are becoming useful centres of research in these subjects. The nucleus of a library in statistics has been built up in the University Department of Statistics.

There are various Hospitals and Laboratories recognised by the University for purposes of practical work in Medicine and Science.

PROVISION FOR RESEARCH

Research work for the M.A. and the Ph.D. degrees in Economics, Sociology and Politics is done in the University School of Economics, Sociology and Politics. A few Research Scholarships, Fellowships and Grants are awarded to deserving students. An account of the facilities for research work available in the Department of Chemical Technology is given in the following pages. Besides the facilities available in the University Departments, there are a number of recognised post-graduate research institutions where facilities are available for research work. Teachers from affiliated colleges and recognised post-graduate institutions are recognised for guiding students working for degrees by research. The University also awards a few Research Studentships every year to persons doing research work in institutions under its jurisdiction.

The University awards the following research degrees:—

M.A., M.Ed., Ph.D. (in the faculties and Arts, Science, Technology, Medicine and Commerce).

D.Litt., M.Sc., M.Sc. (Tech.), M.Sc. (Agri.), M.E., D.Sc., LL.M.

Research Grants are awarded every year to deserving persons.

PUBLICATION AND EXTENSION WORK

The University has published some lectures on Linguistics, on Gujarathi Literature, the History of Gujarat, and Hindu Law. The University has also published Pali Text series edited by Prof. N. K. Bhagwat, Dr. Mackichan's translation of the introduction to two German books, Dr. Garbe's Bhagavadgita, Roth's Nirukta, and Vedic selections. Some Prize Essays have also been published.

In addition, "Some Experiments in General Education" by Mr. S. R. Dongerkery has been published. Further the Botanical Memoirs, Zoological Memoirs and the "The Report of the Inquiry on the Problems of Teachers (including Standard of Education) in the Bombay State" has also been published.

Outstanding works written by teachers and students of the School of Economics and Sociology are published in the University Economics and Sociological Series which was started in 1946, 9 books—5 in Economics and 4 in Sociology—have so far been published in the series.

The University also makes grants of varying amounts to authors in aid of the cost of publication of research works.

A few distinguished persons are invited every year to deliver extension lectures

UNIVERSITY JOURNAL

The University conducts a journal, mainly intended to promote research work by the teachers and students of the University. It has five issues in a year commencing with July and devoted to (1 and 4) History, Economics and Sociology, (2) Arts (3 and 5) Science, in the cyclic order. The journal contains original contributions, but abstracts of theses submitted for the post-graduate examinations of the University are also published. Its annual subscription is Rs. 12 for five issues, while for Nos. 1 and 4 and 3 and 5, it is Rs. 5 for each section, and for No. 2 it is Rs. 3. Single copy of any issue is priced Rs. 3.

MILITARY AND PHYSICAL TRAINING AND FACILITIES FOR GAMES

Military training is not compulsory in the University. Students are encouraged to enrol themselves in the N.C.C.

Physical training is compulsory for the first two years in colleges. There is provision for outdoor games like cricket, foot-ball, tennis and hockey in most of the affiliated colleges and a large number of students take advantage of the facilities offered in this respect.

ASSOCIATIONS IN THE UNIVERSITY

Owing to the extensive jurisdiction of the University it was not practicable to have a Central Association or Associations for the benefit of all University students. Most of the colleges maintain societies of their own, such as Debating Unions, Literary Societies, Historical Societies, Dramatic Societies, College Gymkhanas.

RESIDENCE

Most of the colleges affiliated to the University provide residential accommodation for a fair proportion of their students.

BUDGET: GENERAL FUND

The total budget expenditure for the year 1955-56 has been estimated to be Rs. 35,50,361.

A Provident Fund exists, and subscription to the Fund at the rate of 8-1/3 per cent on the monthly salary is obligatory on every whole-time officer, teacher or servant appointed after the 31st March, 1925, to a substantive appointment carrying a monthly salary of Rs. 30 upwards, and on every one appointed on or after the 1st January, 1947, to a substantive appointment carrying a salary of rupees fifty or upwards per mensem. The University makes a contribution at the rate of 8-1/3 per

cent on the salary of subscriber at the end of each month and compound interest at the rate of $3\frac{1}{2}$ per cent per annum is allowed on the amount standing to the credit of each depositor. On quitting the service of the University, a depositor is entitled to draw out the whole amount standing to his credit in the Fund, provided he has been in the service of the University for at least three years and has been permitted to resign his appointment.

WOMEN'S EDUCATION

Women are admitted to all affiliated colleges on equal terms with men-students. The Sophia College for Women, Bombay, has been affiliated to the University for the course of study leading to the B.A. examination.

UNIVERSITIES INFORMATION BUREAU

The Bureau consists of a Committee of eight members, one of whom is the Vice-Chancellor, while the other seven are drawn from different faculties in this University and a majority of them are those who have experience of Education in India and abroad.

The functions of the Bureau are :—

- (1) to collect and furnish information in regard to Indian and Foreign Universities, other educational institutions and training centres or industrial works ;
- (2) to advice students and give them such other help as may be possible ;
- (3) to correspond with Indian and Foreign Universities, other educational institutions, training centres and industrial works with a view to placing Indians in suitable conditions of study and/or training in those Universities, institutions, centres or works ;
- (4) to keep in constant touch with the work of the office and with applications and inquiries received by the office from students, Indian and Foreign Universities, other educational institutions and training centres or industrial works from time to time.

The Bureau has a library attached to it. There are cabinets in which are arranged alphabetically prospectuses, handbooks and calendars of Indian and Foreign Universities, other educational institutions, training centres and industrial works. The library contains about 5,000 such prospectuses, handbooks and calendars. It has sitting arrangement for 30 readers.

As many of the enquiries as can be answered from the material at the disposal of the Bureau are answered, the rest are referred to the Education Department of the Office of the High Commission of India, London ;

the Indian Embassy in Washington, U.S.A. and other Indian Embassies in Australia, Austria, Belgium, Canada, Czechoslovakia, Denmark, France, Germany, Italy, Japan, Sweden and Switzerland. Inquiries are also addressed to individual Universities and other educational institutions in India and abroad as well as to the local authorities like the Central Overseas Information Bureau of the Government of India, New Delhi, Inter-University Board of India at Madras, U. S. Information Services, Bombay, the British Information Services, Bombay, the British Council, Bombay, and other Consular Offices of foreign countries in Bombay.

The following table gives at a glance the nature and volume of work done by the Bureau for the year ending 30th June, 1954 as compared with the previous year :—

Nature of work.	1953-54	1952-53
No. of documents issued to students on premises	13,503	11,016
No. of documents issued to mofussil students .. .	908	850
No. of personal enquiries attended to on an average per day	60	45
No. of letters despatched .. .	7,685	7,507
No. of applications made for admission to institutions abroad	453	372
No. of admission secured . . .	294	220

THE UNIVERSITY BOARD OF SPORTS

With the establishment of new Universities in the State of Bombay in recent years, the jurisdiction of this University is now confined to Bombay City and Suburbs only. The Board of Sports of this University is composed of the Administrative Heads of the University Departments and Principals of affiliated colleges and other members, not exceeding four, to be co-opted from among persons possessing expert knowledge and experience in a branch or branches of the Sports. The members co-opted on the Board are nominated by the Syndicate, the duration of their term of office being two years and they are eligible to be co-opted again of the Inter-University Badminton Championship.

The objects of the Board are to organise, control, manage and supervise Inter-Collegiate Sports and Tournaments within the jurisdiction of the University and to undertake such Inter-University Competitions as are entrusted to the University by the Inter-University Sports Board. During the year 1954-55 the University was entrusted with the conduct of the Inter-University Badminton Championship.

The University conducted Inter-Collegiate Tournaments in the following games :—

- | | |
|----------------|------------------|
| 1. Athletics | 9. Hu-Tu-Tu |
| 2. Badminton | 10. Swimming |
| 3. Basket Ball | 11. Table Tennis |
| 4. Boxing | 12. Tenni Koit |
| 5. Chess | 13. Tennis |
| 6. Cricket | 14. Volley Ball |
| 7. Football | 15. Wrestling |
| 8. Hockey | |

With the addition of a few newly affiliated colleges in Bombay, a larger number of students participated in the Tournaments. An expenditure of Rs. 5,000 was sanctioned by the Senate.

Personnel of the Board of Sports: Dr. D. P. Sethna of the Grant Medical College was elected Chairman of the Board for the year under report. The other members were the Administrative Heads of University Departments, the Principals of Colleges, the University Sports Secretary and the following four co-opted members :—

1. Khan Bahadur S. H. Mehta.
2. Mr. J. C. Maitra.
3. Professor T. G. Khubchandani.
4. Commander C. B. Sethna.

Inter-University Tournaments: The Senate sanctioned a grant of Rs. 18,000 for Inter-University Tournaments. During the year, the University participated in the following Inter-University Tournaments: Athletics (Men and Women), Aquatics, Badminton (Men and Women), Cricket, Football and Hockey (Men and Women). The University had the distinction of winning the Badminton Tournament and the Women's Athletics Championship for the fifth successive year. The University also won the Cricket, Women's Hockey and the Swimming and Water Polo Championships.

ADMISSION TO THE UNIVERSITY COURSES OF STUDY, EXAMINATION AND DEGREES

ADMISSION TO THE UNIVERSITY

The minimum qualification for admission to the courses of study leading to each of the degrees of—Bachelor of Arts (B.A.), the Bachelor of Science (B.Sc.), the Bachelor of Commerce (B.Com.), and the Bachelor of Architecture (B.Arch.) courses is the passing of the S.S.C. Examination of the S.S.C. Examination Board of the Bombay State (if passed with the prescribed subjects and with the prescribed percentage of marks), the Matriculation Examination of any Statutory University in the Indian Union or an examination recognised by the University as equivalent to its former

Entrance—(Matriculation) Examination. Admission to the courses of study in the University for the Bachelor's degree in Engineering (B.E.), Chemical Engineering (B.Chem. Eng.), and Medicine (M.B., B.S.) is granted only to those who have passed the Intermediate Science Examination of this University or any other equivalent examination in the specified group of subjects. The minimum qualification for admission to the B.T. Degree course is a degree in any Faculty; for the Diploma in Teaching: S.S.C (Matriculation) with at least three years' experience or the First Year College Certificate examination of a college in this University or the Intermediate Examination of a recognized University or Board; for the Diploma in Librarianship S.S.C. (Matriculation) Examination for the two-year course and a Degree in Arts, Science and Commerce for one year course; for the B.Sc. (Tech.) course, the B.Sc. degree of this University with at least a second class or a B.Sc. degree of a recognized University with at least a second class with prescribed subjects (*vide* details printed under the heading 'Chemical Technology'). The minimum qualification for admission to the Bachelor of Laws (LL.B.) course is the passing of the Intermediate Arts, Intermediate Science or Commerce Examination or a degree examination in any other Faculty of the University or an examination equivalent to any of these.

COURSES OF STUDY AND EXAMINATIONS

The University offers in Arts B.A. (General) and (Special), M.A. and D.Litt. degrees; in Education; B.T. and M.Ed. degrees and the Diploma in Teaching; the Diploma in *Librarianship*; in Science B.Sc., M.Sc. and D.Sc. degrees; in *Technology*—Engineering B.E. (Civil), (Mechanical), and (Electrical), and M.E. in (Civil), (Mechanical) and (Electrical); in Textiles, B. Text., in Architecture (B.Arch.); in Chemical Engineering (B.Chem.Eng.); in Textile Chemistry B.Sc. (Tech.); in Veterinary Science B.Sc. (Vet.); in Law, LL.B. and LL.M. degrees; in Medicine the degrees of M.B., B.S., M.D., M.S., B.D.S., B.Sc. (Medical), M.Sc. (Medical), D.Hy. and the Diplomas in Public Health, Psychological Medicine, Forensic Medicine, Medical Radiology and Electrology, Anaesthesiology, and in Venereology and Dermatology; in Commerce B.Com., and M.Com. degrees. The Ph.D. degree is given in Arts, Science, Technology, Commerce and Medicine.

1. Arts

(i) *Intermediate Examination*: The course of study for this examination extends over two academic years during the first of which candidates are examined by affiliated colleges in the subjects of the First Year Courses which have been grouped as shown below, and the eligibility of candidates to enter upon the courses for the Intermediate Arts or the Intermediate Science is determined, in accordance with the subjects in which they satisfy the Principal of a college, as under:—

- (i) Candidates with subjects of group (a) or group (c) are eligible for entering upon the course for the Intermediate Arts.
- (ii) Candidates with subjects of group (b) or group (c) are eligible for entering upon the course for the Intermediate Science Examination.

The following are the groups and the subjects under them appointed by the University for the first two terms and candidates have to take any one of the three Groups A, B, C, as mentioned below :—

GROUP A

Compulsory Subjects :—

1. English Prose and Poetry (Texts), 100 marks, 3 hours.
2. (a) Composition in English with Texts, 50 marks, 1½ hours.
(b) Class Work—25 marks.

Note.—A book is to be recommended, as an aid to the art of writing. No questions with reference to the context are asked.

3. Modern Indian Language with texts or an additional paper in English with texts—100 marks, 3 hours.
4. Classical Language or a Modern European Language other than English with Texts—1 paper 100 marks, 3 hours.
5. Hindi with Text—75 marks, 2 hours.

Optional Subjects :—

The following are the optional subjects out of which the candidates are required to take any such subjects from among them as carry 300 marks in the aggregate :

1. Indian Administration—1 paper, 100 marks, 3 hours.
Section I : Growth and Development of the Constitution.
Section II : Present Constitution.
2. Civics—1 paper, 100 marks, 3 hours.
3. Outlines of Ancient Indian History and Culture—1 paper, 100 marks, 3 hours.
4. Geography—1 paper, 100 marks, 3 hours.
5. Mathematics—2 papers, each of 100 marks and of 3 hours' duration.

GROUP B

1. (i) English Prose—50 marks, 1½ hours.
(ii) Composition in English—(a) One paper of 1½ hours and 50 marks, (b) Class Work—25 marks.

Note.—A book is recommended as an aid to the art of writing. No questions with reference to the context are asked.

2. Modern Indian Language with texts or an additional paper in English with texts—100 marks, 3 hours.
3. Hindi with Texts—75 marks, 2 hours.
4. Physics—1 paper of 100 marks, 3 hours, 50 marks for practical.
5. Chemistry—1 paper of 100 marks, 3 hours, 50 marks for practical.
6. Biology—1 paper of 100 marks, 3 hours, 50 marks for practical.
7. Mathematics—2 papers each of 100 marks and of 3 hours' duration.

GROUP C

Compulsory Subjects :—

1. English Prose and Poetry (Texts)—100 marks, 3 hours.
2. (a) Composition in English—50 marks, 1½ hours.
(b) Class Work—25 marks.

Note.—A book is recommended as an aid to the art of writing. No questions with reference to the context are asked.

3. Modern Indian Language with texts or an additional paper in English with texts—100 marks, 3 hours.
4. Hindi with Text—75 marks, 2 hours.
5. Mathematics—2 papers, each of 100 marks and of 3 hours' duration.

Optional Subjects :—

The following are the optional subjects from among which candidates are required to take either Physics or Chemistry, and two other subjects carrying 200 marks in the aggregate :

1. Physics—1 paper of 100 marks, 3 hours, and a practical of 50 marks.
2. Chemistry—1 paper of 100 marks, 3 hours, and a practical of 50 marks.
3. Classical Language or a Modern European Language other than English with texts—1 paper of 100 marks, 3 hours.
4. Indian Administration—1 paper of 100 marks, 3 hours.
5. Civics—1 paper of 100 marks, 3 hours.
6. Outlines of Ancient Indian History and Culture—1 paper of 100 marks, 3 hours.
7. Geography—1 paper of 100 marks, 3 hours.

At the Intermediate Examination held by the University at the end of the second year, candidates are examined in the following subjects :—

1. English Prose and Poetry (Texts)—100 marks, 3 hours.
2. Composition in English with texts—75 marks, 2 hours.

Note.—A book is recommended as an aid to the art of writing. No questions with reference to the context are asked.

3. Modern Indian Language with texts or an additional paper in English with texts—75 marks, 2 hours.
4. A Classical Language, or a Modern European Language other than English with texts—100 marks, 3 hours.
5. World History—100 marks, 3 hours.
6. Elements of Economics—100 marks, 3 hours.
7. Mathematics—2 papers, each of 100 marks and 3 hours.

or

Logic—2 papers, each of 100 marks and 3 hours.

The minimum for a pass is 30 per cent of the full marks in each head. Candidates who obtain 60 per cent in the aggregate are placed in the First Class and those who obtain 45 per cent in the Second Class.

(ii) *B.A. (General and Special)*.—The course of study for the B.A. (General) Examination extends over two academic years, subsequent to passing the Intermediate Arts Examination and that for B.A. (Special) Examination over the same period.

The Schemes for the B.A. General and Special Examinations are as follows:—

I—B.A. GENERAL

I. English (Compulsory) : Two papers of three hours and one hundred marks each, of which one shall include composition.

II. Four other voluntary subjects (with two papers in each, of three hours and of one hundred marks each save as hereinafter otherwise provided) to be selected from the following Groups (A) to (G), provided that the candidate chooses his subjects from at least three groups and provided further that the candidate who takes (D) (iv) shall take (D) (i) and that the candidate who takes (F) (v) shall take (F) (i) but not (D) (iv).

N.B.—Identical subjects occurring under two separate groups shall not be offered by candidates as two separate subjects.

(A) LANGUAGES—

- (a) *Modern European*.—English, French, German, Portuguese, Italian and Spanish—2 papers based on texts of Modern Literature, Prose, Poetry and Drama in each Language.
- (b) *Modern Indian*.—Marathi, Gujarati, Kannada, Sindhi, Urdu and Hindi—

Two papers as under :

Paper I—Poetry.

Paper II—Drama and Prose: Modern texts.

- (c) *Classical—Oriental and European.*—Sanskrit, Pali, Ardha-Magadhi, Arabic, Persian, Avesta-Pahlavi, Latin, Greek and Hebrew—2 papers—Texts.

(B) PHILOSOPHY—

- (i) History of Philosophy, (ii) Psychology, (iii) Moral and Social Philosophy, (iv) Experimental Psychology and (v) Education.

(C) HISTORY—

- (i) Ancient Europe, (ii) Modern Europe, (iii) Ancient and Mediaeval India, (iv) Modern India, (v) Persian History, (vi) Constitutional History, (vii) Political Science, (viii) Ancient Indian Culture and (ix) Islamic Culture.

(D) ECONOMICS—

- (i) Principles of Economics, (ii) Economic History, (iii) Political Science, (iv) Statistical Methods and (v) Society and Social Evolution.

(E) SOCIOLOGY—

- (i) Cultural Anthropology and (ii) Society and Social Evolution

(F) MATHEMATICS—

- (i) Pure Mathematics, (ii) Applied Mathematics, (iii) Algebra and Geometry, (iv) Calculus and Differential Equations and (v) Statistics.

N.B.—Subjects (iii) and (iv) must be taken together.

(G) SCIENCE—

- (i) Physics, (ii) Chemistry, (iii) Botany, (iv) Zoology, (v) Geology, (vi) Geography and (vii) General Science.

II—B.A. SPECIAL

I. English (Compulsory): Two papers of three hours and one hundred marks each, of which one shall include Composition.

II. Four other voluntary subjects (with two papers in each, of three hours and one hundred marks each, save as hereinafter otherwise provided), so that at least three subjects listed in Roman numerals under any one group from among the Groups (B) to (F), or three heads listed in Roman numerals under any one Language from among the Languages under Group (A)—Sub-groups (a) to (d), are selected. Provided further that a Language offered in addition to the six papers in a Language is not from the same sub-group from which six papers are selected. *A student may, notwithstanding what is stated above, be permitted by*

the Academic Council to offer all the eight papers from the same sub-group, provided that an application is made before the end of the first term, by the student seeking such permission.

Note 1.—The proviso requiring the choice of an additional language, if offered, to be made from a sub-group other than the one to which the language in which six papers are offered for Honours belongs, is in operation from June 1950.

Note 2.—No candidate can take Statistical Methods in Group (D) (Economics) and Statistics under Group (E) (Mathematics) at the same time.

The groups and sub-groups and subjects are as under :—

N.B.—Identical subjects occurring under two separate groups shall not be offered by candidates as two separate subjects.

(A) LANGUAGES—

(a) *English* :

- (i) Papers I and II—The same as for the B.A. (General).
- (ii) Two literary forms : Chaucer (Prologue and a Canterbury Tale), and History of the English Language.
- (iii) Criticism and Prosody ; History of English Literature.

(aa) *Old English* :

- (i) Anglo-Saxon.
- (ii) Middle English.
- (iii) Social History.

(b) *Modern European.*—French or German or Portuguese or Italian or Spanish—

- (i) Papers I and II—The same as for the B.A. (General).
- (ii) Translation, Essay, Grammar and Oral—2 papers.
- (iii) History of Literature from 1500 to 1800 A.D. with a few outstanding illustrative works—2 papers.

(c) *Modern Indian.*—Marathi or Gujarati or Kannada or Sindhi or Urdu or Hindi—

- (i) Papers I and II—The same as for the B.A. (General).
- (ii) Translation, Essay and Grammar—2 papers.
- (iii) History of Literature up to 1800 A.D. with a few outstanding illustrative works—2 papers.

(d) *Classical*—Sanskrit or Pali or Ardha-Magadhi or Avesta-Pahlavi or Persian, Arabic or Greek or Latin or Hebrew—

- (i) Papers I and II—The same as for the B.A. (General).
- (ii) Translation, Grammar and History of Literature—2 papers.

(iii) Old Literature according to the basis requirements of each language—2 papers.

(e) Ancient Indian Culture or Islamic Culture—2 papers each.

(B) PHILOSOPHY—

(i) History of Philosophy, (ii) Psychology, (iii) Moral and Social Philosophy, (iv) Experimental Psychology, (v) Education, (vi) Logic and Metaphysics, (vii) Psychology and Philosophy of Religion and (viii) Advanced Psychology.

N.B.—Candidates taking Special Examination must take at least one of the Subject Nos. (v), (vi), (vii) and (viii). Candidates who take (vii) or (viii) shall take (ii).

(C) HISTORY—

(i) Ancient Europe, (ii) Modern Europe, (iii) Ancient and Mediaeval India, (iv) Modern India, (v) Persian History, (vi) Constitutional History, (vii) Political Science, (viii) Ancient Indian Culture, (ix) Islamic Culture, (x) Physical Anthropology and (xi) Cultural Anthropology.

(D) ECONOMICS—

(i) Principles of Economics, (ii) Economic History, (iii) Political Science, (iv) Statistical Methods, (v) Society and Social Evolution and (vi) Indian Economic Problems.

N.B.—Every candidate for the B.A. (Special) in Economics must offer (i) and (vi).

(E) SOCIOLOGY—

(i) Cultural Anthropology, (ii) Society and Social Evolution and (iii) Social Organization and Social Amelioration.

(F) MATHEMATICS—

(i) Algebra and Geometry, (ii) Calculus and Differential Equations, (iii) Mechanics, (iv) Astronomy, Electricity and Magnetism, (v) Statistics and (vi) Pure Mathematics.

N.B.—Subjects (i), (ii) and (iii) are compulsory. Pure Mathematics shall not be offered by candidates taking the B.A. (Special) Examination in the group.

(G) SCIENCE—

(i) Physics, (ii) Chemistry, (iii) Botany, (iv) Zoology, (v) Geology, (vi) Geography and (vii) General Science.

The minimum for passing the B.A. (General) Examination is 30 per cent of the total in Compulsory English and 30 per cent of the aggregate of the optional subjects, provided that the candidate has obtained not

less than 25 per cent of the marks in each of the optional subjects. Those obtaining 45 per cent or more but less than 60 per cent in the aggregate of the optional subjects (irrespective of marks obtained in each optional subject) are declared to have passed the B.A. (General) Examination with Second Class Honours.

Those obtaining 60 per cent or more in the aggregate of the optional subjects (irrespective of the marks obtained in each optional subject) are declared to have passed B.A. (General) Examination with First Class Honours.

The minimum for passing the B.A. (Special) Examination is 30 per cent of the total marks in Compulsory English and 35 per cent of the total marks in the aggregate of the optional papers.

Those who obtain 45 per cent or more but less than 60 per cent in the aggregate of the optional papers are declared to have passed with Second Class Honours. Alternatively, those of the successful candidates who obtain at least 47 per cent of the marks in the total of the three subjects which they have selected from *one and the same group* and at least 35 per cent of the total marks in the subject selected by them from any other group are declared to have passed with Second Class Honours.

Those who obtain 60 per cent or more in the aggregate of the optional papers are declared to have passed with First Class Honours. Alternatively, those of the successful candidates who obtain at least 67 per cent of the marks in the total of the three subjects which they have selected from *one and the same group* and at least 35 per cent of the total marks in the subject selected by them from any other group are declared to have passed with First Class Honours.

Explanation.—Where a candidate selects all the four subjects from one and the same group he shall not be entitled to the benefit of the alternative rule governing the award of classes contained in this regulation.

III. MASTER OF ARTS (M.A.)

The course of study extends over two years subsequent to passing the B.A. Examination. A candidate is required to select *one* of the following branches:—

- (1) Languages, (2) History—Economics—Sociology—Politics, (3) Philosophy, (4) Mathematics and Statistics, (5) Ancient Indian Culture and (6) Islamic Culture.

The examination consists of eight papers in each subject. A thesis may be offered in lieu of the whole examination in History, Economics, Politics, Sociology and Philosophy or in lieu of the four (out of the six) principal papers in Sanskrit, Pali and Ardha-Magadhi, Persian, or Arabic subject to certain conditions.

The standard of passing is as follows :—

(a) *Languages*

25 per cent marks in each of the eight papers, 30 per cent in the total of the two papers in subordinate language and 40 per cent in the total of the six papers in principal language. A candidate offering a thesis in lieu of four principal papers in his principal language must obtain, in order to pass the examination, 25 per cent of the full marks in each of the four papers in which he appears, 30 per cent in the total of the two papers in his subordinate language, 37½ per cent in the thesis and 40 per cent in the thesis and the two papers in the principal language taken together.

(b) (i) *History, Economics, Sociology and Politics, Philosophy*

(ii) *Ancient Indian Culture* and (iii) *Islamic Culture*

(i) One-fourth of the full marks in each paper and (ii) three-eighths of the total marks obtainable.

(c) *Mathematics*

(i) One-fourth of the full marks in each paper and (ii) three-eighths of the total marks obtainable, or 40 per cent of the total marks obtainable.

(d) *Statistics*

(i) One-fourth of the full marks in each paper and 37½ per cent of the full marks in the two practicals and the laboratory note-books combined and (ii) three-eighths of the total marks obtainable, or (1) 40 per cent of the total marks obtainable and (2) 37½ per cent of the full marks in the two practicals and the laboratory note-books combined.

Successful candidates who obtain 65 per cent of the total marks are placed in the First Class and those obtaining 50 per cent in the Second Class. In the languages group, those who do not satisfy the above condition, but get 75 per cent in the total of the papers in the principal language only, and 30 per cent of the marks in the total of the two papers in a subordinate language, are placed in the First Class and those who obtain 55 per cent of the marks in the total of the papers in the principal language only and 30 per cent of the marks in the total of the two papers in the subordinate language are placed in the Second Class.

(iv) *Diploma in Librarianship*.—A candidate who has passed the S.S.C. Examination of the S.S.C. Examination Board, Bombay State, with the prescribed subjects and the prescribed percentages of marks or Entrance or the Matriculation Examination of the University of Bombay or an examination recognized as equivalent to it and has kept four terms at the Diploma Class in Librarianship conducted by the University of Bombay and (ii) completed the prescribed course of practical work to the satisfaction of the University Library Committee by attending at least

three-fourths of the possible number of periods, is permitted to appear for the examination which consists of

Part I—Written Examination.

Part II—Practical Examination.

Candidates have to appear in both parts simultaneously.

Note.—A candidate who has entered upon the course for the Diploma in Librarianship after acquiring five or more years experience of work in a Library approved by the University Library Committee, or after passing the Degree Examination in any Faculty of this University or of a University recognised by this University, is required to keep only two terms and to complete the prescribed course of practical work to the satisfaction of the Universities Library Committee. In order to go through the course of practical work satisfactorily, the student shall have attended the practical course for at least three-fourths of the possible number of periods. The fees per term are Rs. 50.

Written Examination

Paper I—Evolution and Development of Writing, Books and Libraries.

Paper II—Library Organization.

Paper III—Library Administration and Reference Work.

Paper IV—Classification.

Paper V—Cataloguing.

Paper VI—Outlines of the Cultural History of India.

Paper VII—General Knowledge.

Practical Examination

In Part II of the Examination candidates are required to appear for a practical tests in

(i) Classification.

(ii) Cataloguing.

(iii) Oral and practical test in Reference Service.

To pass the examination a candidate must get a minimum of 40 per cent marks in the written examination (all papers together) and a minimum of 50 per cent marks in the practical examination. A candidate obtaining 70 per cent or more marks in the written and practical examination together is considered to have passed with distinction.

II. SCIENCE

(i) *Intermediate Examination.*—The Intermediate Science Examination is held by the University at the end of the second year. A candidate has to pass in either Group B or Group C in the First year Certificate Examination and is required to study and is examined in composition in English and Composition with Texts (Paper I) in a Modern Indian Language with Texts or an additional paper in English and Physics (two papers and a practical), Chemistry (two papers and a practical), and

Mathematics (two papers), or Geology or Biology (two papers and a practical). To pass the examination, a candidate must obtain 33 per cent of the total marks in Mathematics, 33 per cent in papers and in practical examination separately in other subjects and 30 per cent in Composition in English and Modern Indian Language or an additional paper in English. Candidates who obtain 60 per cent in the aggregate are placed in the First Class and those obtaining 45 per cent in the Second Class.

(ii) *Bachelor of Science (B.Sc.)*.—The course extends over two years subsequent to passing the Intermediate Examination in Science. Candidates may take any two of the following subjects: Mathematics, Physics, Chemistry, Botany, Geology, Zoology, and as a subsidiary subject only Animal Physiology, Anatomy and Embryology, Microbiology and Geography. Of the selected subjects, one will be a principal subject and the other subsidiary. At the examination, papers are set as follows:—

<i>Subject.</i>		<i>As a Subsidiary Subject.</i>	<i>As a Principal Subject.</i>
Mathematics	..	4 papers of three hours each.	8 papers of three hours each.
Physics	..	2 papers and 2 practical examinations.	4 papers and 4 practical examinations.
Chemistry	..	2 papers and 2 days' practical examinations.	4 papers and 3 days' practical examinations.
Botany	..	2 papers and 2 practical examinations.	4 papers and 4 practical examinations.
Geology	..	2 papers and 2 practical examinations.	4 papers and 4 practical examinations.
Zoology	..	2 papers and 2 practical examinations.	4 papers and 4 practical examinations.
Animal Physiology	..	2 papers and 2 practical examinations.	3 papers and 3 practical examinations and an oral examination.
Anatomy and Embryology.		2 papers and 2 practical examinations and an oral examination.	4 papers and 4 practical examinations and an oral examination.

Microbiology	.. 2 papers and 2 practical examinations and an oral examination.	3 papers and 3 practical examinations and an oral examination.
Geography	.. 2 papers and 2 practical examinations.	(As a subsidiary subject only).

For a pass, candidates must obtain in each subject 33 per cent in the papers taken together, and in the practical examination taken together, or in Mathematics in all the papers taken together. Successful candidates who obtain 60 per cent in their principal subject and 45 per cent in the subsidiary subject are placed in the First Class and those who obtain 48 per cent in the principal subject and 40 per cent in the subsidiary subject are placed in the Second Class. Successful candidates who obtain 48 per cent of the marks in the principal and the subsidiary subjects taken together are placed in the Second Class if they obtain 45 per cent in the principal subject and those who obtain 60 per cent of the total marks in the principal and subsidiary subject taken together are placed in the First Class, if they obtain 55 per cent in the principal subject. A candidate who secures 66 per cent in the principal subject is declared to have passed with distinction.

(iii) *Master of Science (M.Sc.)*.—Bachelor of Science of this University or holders of an equivalent degree are admitted to the courses of study for the M.Sc. Degree which extends over a period of two years.

The M.Sc. Examination can be taken (i) by research alone (ii) by written examination and practicals (where possible) and (iii) partly by research and partly by examination and practicals (where possible). The examination comprises of the following branches:—

1. Mathematics and Statistics.
2. Physics.
3. Chemistry.
4. Botany.
5. Zoology.
6. Geology.
7. Animal Physiology.
8. Microbiology.

The Examination in Mathematics and Statistics is the same as at the M.A. Examination. There are *four* papers and *four* practicals in Physics, Chemistry, Botany, Zoology and Microbiology, *five* papers and *five* practicals in Botany and *four* papers at least *three* days' practicals in Geology.

An outline of the scheme for the M.Sc. Examination, partly by dissertation and partly by papers and practicals (where possible) is as under :—

- (1) Three papers each carrying 100 marks and of *three hours'* duration and three practicals each carrying 100 marks, or six papers in the case of Mathematics each carrying 100 marks and of *three hours'* duration. In Microbiology three papers and three practicals and a *viva voce*. A thesis to be written on any of the special subjects provided under Paper III.
- (2) A dissertation or a dissertation and a practical according to the needs of each science subject, as may be recommended by the respective Boards of Studies, carrying 200 marks in all.

The standard prescribed for passing and classes in Mathematics and Statistics is the same as that prescribed at the M.A. Examination in Mathematics and Statistics. In other subjects except Geology, candidates are required to obtain (i) at least 40 per cent of the full marks assigned to the special paper and (ii) 40 per cent of the aggregate of the marks assigned to papers and 40 per cent of the aggregate of the marks assigned to practicals. In the subject of Geology, candidates are required to obtain 40 per cent of the aggregate of the marks assigned to the papers and 40 per cent of the aggregate of the marks assigned to the practicals. Of the successful candidates, those who obtain 65 per cent or more of the marks are placed in the First Class and those who obtain 50 per cent or more in the Second Class.

III. COMMERCE

(i) *Intermediate Examination*.—The course of study extends over two academic years, at the end of the first of which candidates are examined by colleges in the following subjects prescribed by the University for the first two terms in commerce.

Group A—

1. English—Two papers—50 marks each.
2. Composition in a Modern Indian Language or French or German—One paper—50 marks.

(Marathi, Gujarati, Hindi, Sindhi, Urdu and Kannada are the recognized Modern Indian Languages)

Or

An additional paper in English—50 marks.

3. Hindi with Text—75 marks—2 hours.

Group B—

4. Book-keeping and Commercial Arithmetic—One paper—100 marks.
5. Elements of Commerce—One paper—100 marks.
6. Salesmanship and Publicity—One paper—100 marks.

Group C—

7. Economic and Commercial Geography—One paper—100 marks.
8. Elements of Civics and Indian Administration—One paper—100 marks.

Or

Mathematics—One paper—100 marks.

At the Intermediate Examination candidates are examined in the following subjects:—

Group A—

1. English—One paper—100 marks.
2. Commercial Correspondence and Composition—One paper—100 marks.
3. Composition in a Modern Indian Language or French or German—One paper—50 marks. (Marathi, Gujarati, Hindi, Sindhi, Urdu and Kannada are the recognized Modern Indian Languages).

Or

An additional paper in English—50 marks.

4. Elements of Economics—One paper—100 marks.

Group B—

5. Forms of Economic Organization (with special reference to India and the United Kingdom)—One paper—100 marks.

Group C—

6. Accountancy—One paper—100 marks.
7. Either Secretarial Practice or Insurance or Mathematics—One paper—100 marks.

The minimum for a pass is 33 per cent of full marks in each subject and 40 per cent in each group. A candidate obtaining 60 per cent of the total marks obtainable is placed in the First Class and those obtaining 50 per cent in the Second Class.

(ii) *Bachelor of Commerce (B.Com.).*—The course extends over two years subsequent to passing the Intermediate Examination in Commerce of this University. Candidates will be examined in the following subjects:—

Group A—

1. Principles of Economics—Two papers of 100 marks each.
2. Modern Economic Development—One paper—100 marks.
3. English—One paper—100 marks.

Group B—

4. Business Organization—One paper—100 marks.
5. Mercantile Law—One paper—100 marks.
6. Statistics and Scientific Methods—One paper—100 marks.

Group C—

7. Any one special subject of the following—3 papers—100 marks each :

1. Accounting and Auditing.
2. Actuarial Science.
3. Banking.
4. Economics of Cotton.
5. Public Finance and Administration.
6. Statistics.
7. Transport.
8. Theory and Practice and Co-operation.

To pass the examination the candidate must obtain 33 per cent of the full marks in each subject and 40 per cent in each group. Those of the successful candidate who obtain 60 per cent of the total marks obtainable are placed in the First Class (Honours) and those obtaining 50 per cent in the Second Class (Honours).

(iii) *Master of Commerce (M.Com.)*.—Any person who has taken the degree of the Bachelor of Commerce of this University or of any other University recognized by this University as equivalent thereto may, after he has worked under the guidance of a recognized University teacher for at least two years subsequent to his passing the Bachelor of Commerce Examination, be admitted to the examination for the degree of Master of Commerce in accordance with the relevant regulations.

Candidates may appear *either* for a written examination of 8 papers each of 3 hours' duration and carrying 100 marks, *or* may submit a thesis on a subject dealt with in any of the papers prescribed, in lieu of the whole of the written examination. The written examination shall consist of the following subjects:—

Group A—Compulsory Subjects

1. Public Economics—One paper—100 marks.
2. Organized Markets—One paper—100 marks.
3. Organization of Trade and Transport—One paper—100 marks.
4. Corporation Finance—One paper—100 marks.

Group B—Voluntary Subjects

(a) Cost Accounting—4 papers—100 marks each.

or any two of the following subjects:—

- (b) Actuarial Science (Life Office)—Two papers of 100 marks each.
- (c) Demography and Mortality Investigations—Two papers of 100 marks each.
- (d) (i) Quality Control—1 paper of 100 marks.
(ii) Economics Statistics—1 paper of 100 marks.
- (e) (i) Agricultural Co-operation—1 paper of 100 marks.
(ii) Co-operative Finance and Marketing—1 paper of 100 marks.

- (f) (i) Organisation of Industries—1 paper of 100 marks.
- (ii) Labour Administration—1 paper of 100 marks.
- (g) (i) Foreign Exchanges—1 paper of 100 marks.
- (ii) International Banking—1 paper of 100 marks.

To pass the examination the candidate must obtain 30 per cent of the full marks in each paper and 40 per cent in each group. Successful candidates who obtain 65 per cent of the total marks obtainable are placed in the First Class and those obtaining 50 per cent in the Second Class.

IV. TEACHING

(i) *Diploma in Teaching*.—A candidate who has passed the Matriculation or the Entrance Examination of this University or S.S.C. Examination of the S.S.C. Examination Board, Bombay State, in the prescribed subjects and with the prescribed percentages of marks or an examination recognized as equivalent to the Matriculation, and has obtained subsequently teaching experience for a period of not less than three years, is allowed to appear for the examination for the Diploma in Teaching, provided he has kept two terms (each of 65 days) at a College affiliated to this University for the said diploma and has completed the prescribed course of practical work to the satisfaction of the head of his college. Candidates who have passed the Inter-Arts, Inter-Science and Inter-Commerce Examinations can appear for the said diploma after keeping two terms. The examination consists of two parts.

Part I (Four papers)—Written Examination.

Part II (Two lessons)—Practical Examination.

PART I

Paper I—Elementary Principles of Education and Psychology ;

Paper II—Special Methods ;

Paper III—General Methods, School Hygiene and School Administration ;

Paper IV—An outline of Twentieth Century developments in Indian Education and Educational Administration in the Province of Bombay.

In the papers of Methods—General and Special—candidates shall answer questions on the Methods pertaining to the subjects selected by them for Part II.

PART II

Practical Examination

In Part II of the examination the teaching ability of candidates shall be judged by a test in two lessons, in any two out of three school subjects selected by the candidates for practice lessons. They will be tested in their practical skill in class management as well as in class teaching.

They will be required to produce for inspection by the examiners :—

- (a) A diary of demonstration and directed lessons observed ;
- (b) A journal containing notes of lessons given, together with the observations on these lessons by the Master of Method.

The total marks for the examination shall be 400 for Theory and 200 for Practical.

A candidate obtaining 40 per cent of the total marks separately in Part I and in Part II is declared to have passed the examination.

A candidate obtaining 65 per cent in the aggregate and not less than 50 per cent in Part II is declared to have passed with distinction.

(ii) *Bachelor of Teaching*.—Graduates of this or of any other recognized University who have (i) kept two terms (the first and the second) of lectures on the Theory and Practice of Education in a Training College affiliated to this University for the purposes of the B.T. Degree, and (ii) completed a course of practical work, extending over two school terms to the satisfaction of the Head of the Institution in which the candidates are studying are allowed to appear for the examination for the Bachelor of Teaching. The examination is held in two parts: Part I—Written Examination and Part II—Practical Examination. A candidate is not permitted to appear for Part II unless he produces a satisfactory certificate that he has served, subsequent to his passing the degree examination, as a full-time teacher for 100 working days on the staff of a school or schools approved by the Syndicate prior or subsequent to his keeping two terms' attendance in a Training College.

Written Examination

1. *Theory of Education*—Psychological—

- (i) Educational Psychology.
- (ii) Experimental Psychology and Statistical Methods.

2. *Theory of Education*—Philosophical—

- (i) Principles of Education.
- (ii) General Method.

3. *Practice of Education*—(Special Methods)—

Methods in any two of the following :

- (i) Method in English.
- (ii) Method in Modern Indian Languages.
- (iii) Method in Sanskrit.
- (iv) Method in Persian.
- (v) Method in French.
- (vi) Method in History.
- (vii) Method in Geography.
- (viii) Method in Mathematics.
- (ix) Method in Science.

4. *Educational Administration*—

- (i) School Organization and Management.
- (ii) School Hygiene and Educational Administration.

5. *History of Education*—

- (i) Outline of History of Indian Education.
- (ii) Indian Education and its Problems.

Each subject will have one paper of three hours and one hundred marks.

In Part II of the examination, candidates will be tested in their practical skill in class management and class teaching. Each candidate will be required to give lessons in two special subjects selected by him under Part I.

The total number of marks for the Part I examination will be 500, and that for Part II—300.

To pass the examination in either Part I or Part II, a candidate must obtain not less than 40 per cent of the total number of marks for the said part.

To pass the whole examination, a candidate must satisfy the examiners in Parts I and II and obtain not less than 40 per cent of the total marks in each.

Such of the candidates as appear for Parts I and II at the same time and obtain an aggregate of 66 per cent or more in each Part are declared to have passed the examination with distinction; those who obtain 60 per cent or more in the aggregate of both the Parts taken together at one and the same examination are declared to have passed the examination in the First Class and those who obtain 50 per cent or more in the aggregate of both the Parts taken together at one and the same examination are declared to have passed the examination in the Second Class.

(iii) *Master of Education (M.Ed.)*.—Any person who has taken the Degree of Bachelor of Teaching of this University or a Degree of another University recognized as equivalent thereto may be admitted to the examination for the Degree of Master of Education, after having fulfilled the requirements as laid down in the following Ordinances and Regulations:—

The M.Ed. Degree may be taken by :

- (1) Thesis or
- (2) Papers and Dissertation.

1. *M.Ed. Examination by Thesis*

A candidate desiring to submit a thesis must have worked under the guidance of a Recognized Post-graduate Teacher for at least two years subsequent to his passing the B.T. Examination. The thesis shall be the candidate's own work carried out under the guidance or supervision of the teacher and shall be either (i) a critical analysis of existing data or, (ii) a record of original investigation, or (iii) a combination of these, and shall be accompanied by a certificate signed by the teacher stating that the thesis is worthy of examination. The examination to be taken by thesis shall be on a subject connected with the history, theory, practice or administration of education.

2. *M.Ed. Examination by papers and dissertation*

(a) A candidate desiring to appear for the M.Ed. by papers and dissertation shall :

- (i) if he is a full-time student undergo a regular course of study in an institution recognized for the purpose for *one academic year* after passing the B.T. Examination.
- (ii) if he is a part-time student, undergo a regular course of study in an institution recognised for the purpose for *two academic years* after passing the B.T. Examination.

Explanation.—A full-time student is a student who is not employed and who attends an institution recognized for the purpose for not less than four hours per day, for the purpose of lectures, tutorials and library work.

Attention of the candidates is drawn to the following rule relating to post-graduate studies.

“No post-graduate student will be eligible to appear for an examination by papers for a post-graduate degree unless he has attended not less than *two-thirds* of the number of lectures delivered in the subject.”

(b) A candidate may also appear for the M.Ed. Examination by papers and dissertation if he has worked under the guidance of a recognized teacher for a period of at least two years after passing the B.T. Examination.

The scheme of the M.Ed. Examination by papers and dissertation is as follows :—

(1) Dissertation (obligatory)—200 marks.

(2) *Compulsory Papers :*

Paper I—Philosophy of Education—100 marks—3 hours.

Paper II—Advanced Educational Psychology—100 marks—3 hours.

(3) *Optional Papers*: Every candidate shall appear in two papers (each of three hours' duration and carrying 100 marks) from any one of the following five optional groups:

Group I—Education in Modern India—Paper I and Paper II.

Group II—Administration of Education—Paper I and Paper II.

Group III—Comparative Education—Paper I and Paper II.

Group IV—History of Educational Thought—Paper I and Paper II.

Group V—Experimental Education—Paper I and Paper II.

or

Vocational Guidance for Paper II.

The dissertation shall be on an educational topic approved by the University. A student shall submit to the University not later than the 20th July, the topic on which he proposes to work for the purpose of his dissertation. Such approval shall normally be communicated to the student before the end of September following. If a subject suggested by any student is not approved he will be at liberty to suggest others provided that in all such cases a subject is got approved by the end of October at the latest.

A full-time student shall submit his dissertation at least one month before the date of the examination; and a part-time student or a student working under the guidance of a University teacher under the provision of Regulation 80 (b) shall submit his dissertation at least six months before the date of the examination.

To pass the examination a candidate must obtain 30 per cent of the marks in each paper, 40 per cent in the dissertation and 40 per cent in the whole examination. Those of the successful candidates who obtain 65 per cent or more of the total marks will be placed in the First Class and those obtaining 50 per cent or more in the Second Class provided that a candidate whose marks are carried over under 82-A shall not be eligible for a class or any University awards.

V. AGRICULTURE

There is no Agricultural College at present affiliated to this University and examinations in Agriculture are not, therefore, held by the University at present. Facilities, however, exist in the University School of Economics and Sociology for doing Research in Agricultural Economics for the M.Sc. (Agri.) degree by thesis. Some teachers belonging to different recognized institutions have also been recognized for guiding students for the M.Sc. (Agri.) and the Ph.D. (Agri.) degrees in certain other branches.

VI. VETERINARY SCIENCE

Bachelor of Science (Veterinary).—A candidate for the degree of Bachelor of Science (Vet.) must have passed the Intermediate Science Examination of this University with Biology as his optional subject or an examination of another authority or University recognized as equivalent thereto.

Candidates are required to pass four examinations, viz., the First, the Second, and the Third Year Examination in Science (Vet.) and the examination for the degree of Bachelor of Science (Vet.).

(i) *First Year Examination in Science (Veterinary).*—The course of study for this examination extends over a period of one year after passing Inter. Science Examination with Biology.

Candidates are examined in the following subjects:—

- (1) Anatomy.
- (2) Animal Husbandry. ..
- (3) Physiology including Bio-chemistry, Histology and Embryology.

(ii) *Second Year Examination in Science (Veterinary).*—The course of study for this examination extends over a period of one year after passing the First Year Science (Vet.) Examination.

Candidates are examined in the following subjects:—

- (1) Anatomy including dissection. Flaying.
- (2) Pharmacy, Pharmacology and Materia Medica.
- (3) Animal Husbandry.
- (4) Shoeing.

(iii) *Third Year Examination in Science (Veterinary).*—The course of study for this examination extends over a period of one year after passing the Second Year Examination in Science (Vet.).

Candidates are examined in the following subjects:—

- (1) Parasitology.
- (2) Medicine including Therapeutics.
- (3) Surgery including Obstetrics.
- (4) Pathology.
- (5) Bacteriology including Mycology.

(iv) *Examination for the Degree of Bachelor of Science (Veterinary).*—The course of study for this examination extends over a period of one year after passing the Third Year Examination in Science (Vet.).

Candidates are examined in the following subjects:—

- (1) Medicine—Preventive Medicine.
- (2) Surgery—Surgical Diseases, Operative Surgery and Soundness and Dystokia.
- (3) Meat Inspection and Milk Hygiene.

Candidates for all the four examinations must obtain, in order to pass, forty per cent of the maximum number of marks obtainable in each subject, papers and practicals combined, or in practicals where there are no papers. Candidates who obtain sixty per cent of the total on the aggregate of the four years are placed in the First Class. Of the candidates placed in First Class, those candidates who obtain sixty per cent of the total marks in each of the four years separately are declared to have passed with *distinction*.

VII. ENGINEERING

Revised Courses of Study for the B.E. (Civil, Mechanical and Electrical) Examinations

A candidate for the degree of Bachelor of Engineering must have passed the Intermediate Examination in Science of this University with Mathematics as his optional subject or the Intermediate Examination in Science of a University recognized by this University in the group of Mathematics, Physics and Chemistry, or the Intermediate Arts Examination with Mathematics as the optional subject and the B.A. Examination with Physics and Chemistry as the optional group.

A candidate is required to pass three examinations the first, to be called the First Examination in Engineering, the second, the Second Examination in Engineering (Civil, Mechanical or Electrical) and the third, the Examination for the Degree of Bachelor of Engineering, Civil, Mechanical or Electrical. The duration of the course is three years.

(i) First Examination in Engineering (Civil, Mechanical and Electrical)

Candidates are examined in the subjects 1 to 9 specified below :—

- 1 CME Mathematics I—Paper I (one paper of 100 marks).
- 2 CME Mathematics I—Paper II (one paper of 100 marks).
- 3 CME Applied Mechanics (one paper of 100 marks).
- 4 CME Machine Drawing (one paper of 100 marks and term work of 50 marks).
- 5 CME Surveying (one paper of 100 marks; term work of 50 marks and practical examination of 25 marks).
- 6 CME Electrical Engineering I (one paper of 100 marks).
- 7 CME Heat Engines I (one paper of 100 marks).
- 8 CME Workshop Practice (Practical examination of 100 marks and term work of 50 marks).
- 9 CME Civil Engineering I (one paper of 100 marks and term work of 25 marks).

(ii) *Second Examination in Engineering (Civil)*

Candidates are examined in the following subjects in the manner specified below :—

- 10 CME Mathematics II (one paper of 100 marks).
- 11 CME Materials and Structures I (one paper of 100 marks, term work 50 marks).
- 12 CME Hydraulics I (one paper of 100 marks).
- 13 CME Heat Engines II (one paper of 100 marks—Term work 25 marks—Practical examination of 75 marks).
- 14 C Design and Drawing (one paper of 100 marks—Term work of 40 marks—oral and sketching—35 marks).
- 15 C Surveying II (one paper of 100 marks—Term work of 25 marks—Practical examination of 50 marks).
- 16 CM Electrical-Technology I (one paper of 100 marks).
- 17 CM Electrical-Technology II (one paper of 100 marks—Term work of 25 marks—Practical examination of 75 marks).
- 18 C Workshop Practice (College Certificate).
- 19 C Civil Engineering Paper II (one paper of 100 marks).

(iii) *Bachelor of Engineering (Civil)*

Candidates are examined in the following subjects :—

- 20 CME Mathematics III (one paper of 100 marks).
- 21 C Theory of Structures—Paper I (one paper of 100 marks).
- 22 C Theory of Structures—Paper II (one paper of 100 marks).
- 23 C Structural Design and Drawing (one paper of 100 marks 4 hours).
- 24 C Hydraulics and Hydraulic Machinery (one paper of 100 marks and term work of 25 marks).
- 25 C Irrigation and Storage (one paper of 75 marks of 2 hours).
- 26 C Railways, Bridges and Highway Engineering (one paper of 75 marks of 2 hours).
- 27 C Watersupply and Sanitary Engineering (one paper of 100 marks).
- 28 C Quantity Surveying and Costing (College Certificate only).
- 29 C Engineering Geology (one paper of 100 marks and Practical examination of 50 marks).
- 30 C Design and Drawing (200 marks).
- 31 C Engineering Economics and Works Management (College Certificate only).

(iv) *Second Examination in Engineering (Mechanical)*

Candidates are examined in the following 8 subjects in the manner specified below :—

- 10 CME Mathematics II (one paper of 100 marks).
- 11 CME Materials and Structures I (one paper of 100 marks—Term work of 50 marks).
- 12 CM Hydraulics I (one paper of 100 marks).
- 13 M Heat Engines II (one paper of 100 marks)
- 14 ME Principles of Machine Design and Drawing (one paper of 100 marks—Term work of 50 marks).
- 15 M Theory of Machines I (one paper of 100 marks).
- 16 CM Electrical Technology I (one paper of 100 marks).
- 17 M Electrical Technology II (one paper of 100 marks—Term work of 25 marks—Practical examination of 75 marks).
- 18 ME Mechanical Technology and Practice I (College Certificate).

(v) *Bachelor of Engineering (Mechanical)*

Candidates are examined in the following subjects grouped under Parts I and II in the manner specified below :—

PART I

- 19 ME Mechanical Technology and Practice II (one paper of 100 marks—Practical examination of 75 marks—Term work of 75 marks).

PART II

- 20 ME Mathematics III (one paper of 100 marks).
- 21 ME Materials and Structures II (one paper of 100 marks).
- 22 ME Business Organization and Factory Management (one paper of 100 marks).
- 23 M Hydraulics II (one paper of 100 marks—Term work of 25 marks).
- 24 M Heat Engines III (one paper of 100 marks).
- 25 M Heat Engines IV (one paper of 100 marks—Term work of 25 marks—Practical examination of 100 marks).
- 26 M Metallurgy (one paper of 100 marks—Term work of 25 marks).
- 27 M Theory of Machines II (one paper of 100 marks).
- 28 M Machine Design (one paper of 100 marks—4 hours—Term work of 40 marks—Practical examination (oral), 35 marks).

(vi) *Second Examination in Engineering (Electrical)*

Candidates are examined in the following eight subjects in the manner specified below :—

- 10 MCE Mathematics II (one paper of 100 marks).
- 11 MCE Materials and Structures I (one paper of 100 marks—Term work of 50 marks).
- 12 E Hydraulics I (one paper of 100 marks).
- 13 CE Heat Engines II (one paper of 100 marks—Term work of 25 marks—Practical examination of 75 marks).
- 14 ME Principles of Machine Design and Drawing (one paper of 100 marks—Term work of 50 marks).
- 15 E Electrical Engineering I (one paper of 100 marks).
- 16 E Electrical Engineering II (one paper of 100 marks).
- 17 E Applied Electronics I (one paper of 100 marks).
- 18 ME Mechanical Technology and Practice I (College Certificate).

(vii) *Bachelor of Engineering (Electrical)*

Candidates are examined in the following subjects grouped under Parts I and II in the manner specified below :—

PART I

- 19 ME Mechanical Technology and Practice II (one paper of 100 marks—Practical examination of 75 marks—Term work of 75 marks).

PART II

- 20 ME Mathematics III (one paper of 100 marks).
- 21 ME Materials and Structures II (one paper of 100 marks).
- 22 ME Business Organization and Factory Management (one paper of 100 marks).
- 23 E Electrical Power I (one paper of 100 marks).
- 24 E Electrical Power II (one paper of 100 marks).
- 25 E Electrical Measurements (one paper of 100 marks).
- 26 E Electrical Engineering III (one paper of 100 marks—Term work of 50 marks—Practical examination of 100 marks).
- 27 E Applied Electronics II (one paper of 100 marks—Term work of 25 marks).
- 28 E Principles of Electrical Design (one paper of 100 marks—4 hours—Term work of 40 marks—Practical examination (oral) 35 marks).

STANDARD FOR PASSING THE EXAMINATION

F.E. (Civil, Mechanical and Electrical) and S.E. (Civil, Mechanical and Electrical)

To pass the examination a candidate must obtain 40 per cent of the full marks in each subject and 45 per cent of the total marks obtainable. The minimum of 40 per cent for a pass must be obtained separately in the written examination, term work and practical examination.

Those of the successful candidates who obtain 55 per cent of the total marks obtainable will be placed in the Second Class.

Those candidates who obtain 66 per cent of the total marks obtainable will be placed in the First Class.

B.E. (Civil)

To pass the examination, a candidate must obtain 40 per cent of the full marks in each subject, and 45 per cent of the total marks obtainable. The minimum of 40 per cent must be obtained separately in the written examination, term work and practical examination.

(a) Those of the candidates who obtain 55 per cent or more of the total marks obtainable will be deemed to have passed with Second Class Honours.

(b) Candidates who pass with Honours and obtain 66 per cent or more marks will be deemed to have obtained First Class Honours.

(c) The names of candidates who pass with Honours and are placed in the First Class shall be arranged in order of merit.

B.E. (Mechanical) and B.E. (Electrical)

To pass the examination a candidate must obtain 40 per cent of the full marks in each subject, and 45 per cent of the total marks. The minimum of 40 per cent must be obtained separately in the written examination, term work and practical examination.

(a) Those of the candidates who obtain 55 per cent or more of the total marks obtainable in Parts I and II will be deemed to have passed with Second Class Honours.

(b) Candidates who pass with Honours and obtain 66 per cent or more in Parts I and II together will be deemed to have obtained First Class Honours.

(c) The names of candidates who pass with Honours and are placed in the First Class shall be arranged in order of merit.

For being eligible for a class, a candidate must pass in *each* part at one *sitting* or in *both* parts at one *sitting*.

(viii) *Master of Engineering (M.E.)*.—A candidate who has passed the B.E. Examination of this University and has worked for at least three terms under the guidance of a University teacher is admitted to the examination in the Special Branch in which he has taken the B.E. Degree Examination (four terms in a branch other than the one in which he has taken the B.E. Degree Examination).

A candidate is required to submit the details of the scheme of his work through the recognized teacher under whom he works. The scheme may be modified by the Academic Council in such a manner as it deems fit on the recommendation of the Board of Studies in Engineering and the candidate is examined on such modified scheme.

The examination can be taken by a written examination and *either* a practical examination or a dissertation in lieu of the practical examination.

The written examination consists of four papers of not less than three hours' duration.

The practical examination consists of both practical and oral tests extending over a period of not less than 12 hours.

The dissertation may consist of a report of any research work done by the candidate or a comprehensive and critical review of any recent development of the subject or a detailed report of any important design or development work that the candidate has executed on his own responsibility.

Each of the papers carries 100 marks and the practical examination or dissertation carries 400 marks.

Those of the candidates who secure 50 per cent of the total marks obtainable are declared to have passed the examination. Those of the candidates who secure 70 per cent of the total marks obtainable are deemed to have passed with *distinction*.

TEXTILES

IX. BACHELOR OF TEXTILES (B.TEXT.)

A candidate for B.Text degree must have passed the Inter-Science Examination of this University with Physics, Chemistry and Mathematics as his subjects or an examination of another University recognised as equivalent thereto. Candidates have to pass four examinations.

During the First Year of which the candidate have to pass the—

(i) *First Year Examination* held by the Principal of the College in the following subjects :

- (1) Drawing and Colour—One paper of 4 hours—100 marks.
- (2) Chemistry—3 papers of 4 hours—100 marks.
- (3) Electro Technics—3 papers of 4 hours—100 marks.
- (4) Mechanics—3 papers of 4 hours—100 marks.

Practicals—

- (5) Chemistry Laboratory—100 marks.
- (6) Electro Technics Laboratory—100 marks.
- (7) Machine Drawing—100 marks.

(ii) *Second Year Examination in Textiles.*—The course of study for this examination extends over a period of one year after the F. Y. Examination in Textiles and candidates are required to study and be examined in :

- (1) Fabric Structure—One paper—4 hours—100 marks.
- (2) Mathematics and Statistics—2 papers each of 3 hours—200 marks.
- (3) Mechanics of Textile Machinery—One paper—3 hours—100 marks.
- (4) Spinning—One paper—3 hours—100 marks.
- (4) Weaving—One paper—3 hours—100 marks

Note.—There is no practical examination in Workshop Practice, but 100 marks are allocated for it, and the marks allocated by the institution for the practical work done by the students in the course of sessional work are added to their total marks.

To pass the examination, a candidate must obtain 40 per cent of the total number of marks obtainable in each subject and sessional work and 45 per cent in the aggregate of marks assigned for all the subjects and sessional work.

(iii) *Third Year Examination in Textiles.*—The course of study extends over a period of one year after passing the Second Year Examination in Textiles and candidates for the examination are examined in :

- (1) Textile Technology—3 hours—1 paper—100 marks.
- (2) Textile Chemistry—3 hours—1 paper—100 marks.
- (3) Descriptive Engineering—3 hours—1 paper—100 marks.
- (4) Physics—3 hours—1 paper—100 marks.
- (5) Spinning—3 hours—1 paper—100 marks.
- (6) Weaving—3 hours—1 paper—100 marks.

Practicals—

- (7) Textile Testing—3 hours—100 marks.
- (8) Dyeing, Sizing and Finishing Laboratory—3 hours—100 marks.

All candidates for the Third Year Examination in Textiles must obtain, in order to pass, forty per cent of the total number of marks obtainable in each subject, papers and practicals combined, or in practicals

where there are no papers and forty-five per cent of the aggregate marks assigned for the papers, practicals and sessional work done at the college during the year.

(iv) *Degree Examination for the Bachelor of Textiles.*—Candidates who have passed the Third Year B. Text. Examination and have subsequently kept two terms for the courses in textiles are examined in the following subjects:—

- (1) Spinning—3 hours—One paper—100 marks.
- (2) Weaving—3 hours—One paper—100 marks.
- (3) Textile Costing—3 hours—One paper—100 marks.
- (4) Textile Mills Planning and Organization—3 hours—One paper—100 marks.
- (5) Economics with special reference to Cotton Industry—3 hours—One paper—100 marks.
- (6) Textile Physics—3 hours—One paper—100 marks.
- (7) Spinning or Weaving Special Paper—3 hours—One paper—100 marks.

All candidates for examination for the Degree of Bachelor of Textiles must obtain, in order to pass, forty per cent of the total number of marks obtainable in each subject—papers and practicals combined, and in the sessional work done at the college during the four sessions and 45 per cent of the aggregate marks for papers, practicals and sessional work.

Classes are awarded to the successful candidates in accordance with the following scheme:—

Candidates obtaining 70 per cent or more of the total marks—
Distinction.

Candidates obtaining 60 per cent or more of the total marks—
First Class.

Candidates obtaining 50 per cent or more of the total marks—
Second Class.

X. CHEMICAL TECHNOLOGY COURSES OF STUDY

The Department of Chemical Technology has been instituted to form a link between science and industry, so that University graduates in pure science, who intend to adopt an industrial career may obtain the necessary technological training to take an important part in industry. As a teaching institution it performs therefore, the dual function of providing an outlet for graduates of the colleges and of supplying the demand for technologists capable of applying their knowledge to practical problems without unduly long apprenticeship in the factory. In the

present stage of development of the Indian chemical industry it has been necessary to provide for specialisation in specific branches of chemical technology, as well as training in general and chemical engineering. The courses of study are so organised that instruction in the special subject is based on a firm foundation of chemical and engineering knowledge.

(i) *The Degree of B.Sc. (Tech.)*

Seven courses of study, Textile Chemistry, Food Technology, Technology of Intermediates and Dyes, Technology of Plastics, Technology of Pigments, Paints and Varnishes, Technology of Oils, Fats and Waxes, and Technology of Pharmaceuticals and Fine Chemicals, each extending over two years, have been organised. Students who pursue one of these courses satisfactorily and pass the prescribed examinations held at the end of the first year and second year of study respectively, are awarded the degree of B.Sc. (Tech.). As a part of each course, students are required to work for at least two months in an approved factory or laboratory and to submit satisfactory reports to the Director.

The minimum qualification for admission is a B.Sc. of the University of Bombay in the Second Class with Chemistry as principal subject, and Physics (for Textile Chemistry, Food Technology, Technology of Intermediates and Dyes, Technology of Plastics, Technology of Pigments, Paints and Varnishes, Technology of Oil, Fats and Waxes) or Botany (for Technology of Pharmaceuticals and Fine Chemicals) as subsidiary subject, or other equivalent qualification. Admissions are made strictly according to merit. Thirty-four students are admitted for Textile Chemistry, 15 for Food Technology, 16 for Dyestuff Technology, 8 for Technology of Plastics, 8 for Technology of Pigments, Paints and Varnishes, 16 for Technology of Oils, Fats and Waxes and 18 for Technology of Pharmaceuticals and Fine Chemicals.

In addition to the eight reserved seats for the Technology of Intermediates and Dyes, seats are reserved for graduates of Universities other than those in the State of Bombay as follows: 10 for Textile Chemistry, 5 for Food Technology, 3 for Technology of Plastics, 3 for Technology of Pigments, Paints and Varnishes, 5 for Technology of Oils, Fats and Waxes and 5 for Technology of Pharmaceuticals and Fine Chemicals. These 31 seats are allocated to the various States as follows: Rajasthan—4; Jammu & Kashmir—2; Pepsu—1; Punjab—1; Saurashtra—1; Mysore—1; Travancore-Cochin—1; Andhra—1; Madhya Pradesh—1; Madras—2; Part 'C' & 'D' States—4; Unreserved—12.

The following are the details of the courses of study and subjects of the First Year B.Sc. (Tech.) Examination and of the Examination for the Degree of B.Sc. (Tech.):—

FIRST YEAR—B.Sc. (TECH.)

(For all courses)

Subject	Examination		Periodic	Total
	Hours	Marks	Tests Marks	
1. Elements of Economics ..	2	35	15	50
2. General Chemical Technology.	3	70	30	100
3. Mathematics or Forensic Pharmacy and Toxicology ..	2	35	15	50
4. General Engineering I ..	2	35	15	50
5. General Engineering II or Physiology and Pharmacology	2	35	15	50
6. Chemical Engineering I or Pharmacy ..	2	35	15	50
7. Chemical Engineering II or Manufacture of Yarn and Cloth ..	2	35	15	50
8. Laboratory work (in non-University examination subjects) ..	—	—	—	200
	—	280	120	600

Every candidate for the degree is required to work for at least two months in an approved works where industrial operations relevant to his course of study are carried out and has to submit satisfactory reports to the Head of the Institution.

Each student in Food Technology, Technology of Intermediates and Dyes, Technology of Plastics, Technology of Pigments, Paints and Varnishes and Technology of Oils, Fats and Waxes, shall be required to solve a problem which shall be set by the Professors and/or Readers in the Institution in the respective subjects not less than three months prior to the final examination for the degree of B.Sc. (Tech.) as "Home Paper".

To ensure uniform attention of students to their work throughout each year of their study, the marks at each examination are awarded jointly on the basis of annual examinations and periodic tests. Seventy per cent of the marks are allotted to each of the papers and to each day's practical examination and 30 per cent to the periodic tests in the respective subject heads.

Marks up to maximum of 200 are assigned on the basis of laboratory work by the Heads of Laboratories, in practical subjects in which there is no University examination, and reported to the Registrar by the Head of the Institution before the commencement of the First Year B.Sc. (Tech.) Examination.

SECOND YEAR—DEGREE OF B.Sc. (TECH.)

I. Textile Chemistry

Papers

Subject	Examination		Periodic	Total
	Hours	Marks	Tests Marks	
1. Costing and Industrial Administration and Relations ..	3	70	30	100
2. Chemistry of Intermediates and Dyes I ..	3	70	30	100
3. Chemistry of Fibres and Dyeing ..	3	70	30	100
4. Technology of Bleaching, etc. ..	3	70	30	100
5. Technology of Dyeing and Printing ..	3	70	30	100
	—	350	150	500

Practical and Oral

Subject	Examination		Periodic	Total
	Hours	Marks	Tests Marks	
1. Experimental Dyeing and Technical Analysis ..	3×6	210	90	300
2. Tinctorial Chemistry ..	1×6	70	30	100
3. Laboratory work (in non-University examination subjects) ..	—	—	—	200
				600

II. Food Technology Papers

Subject	Examination		Periodic	Total
	Hours	Marks	Tests Marks	
1. Costing and Industrial Administration and Relations ..	3	70	30	100
2. Bio-chemistry, Nutrition and Microbiology ..	3	70	30	100
3. Chemistry of Foods I ..	3	70	30	100
4. Chemistry of Foods II ..	3	70	30	100
5. Technology of Foods ..	3	70	30	100
..	—	350	150	500

Practical and Oral

Subject	Examination		Periodic	Total
	Hours	Marks	Tests Marks	
1. Analysis of Foods ..	2×6	140	60	200
2. Analysis of Waters ..	1×6	70	30	100
3. Home Paper and Oral ..	—	100	—	100
4. Laboratory work (in non-University examination subjects) ..	—	—	—	200
..	—	—	—	600

III. Technology of Intermediates and Dyes Papers

Subject	Examination		Periodic	Total
	Hours	Marks	Tests Marks	
1. Costing and Industrial Administration and Relations ..	3	70	30	100
2. Chemistry of Intermediates and Dyes I ..	3	70	30	100
3. Chemistry of Intermediates and Dyes II ..	3	70	30	100
4. Technology of Intermediates and Dyes ..	3	70	30	100
5. Chemistry and Technology of Dyeing and Printing ..	3	70	30	100
	—	350	150	500

Practical and Oral

Subject	Examination		Periodic	Total
	Hours	Marks	Tests Marks	
1. Analysis of Intermediates and Dyes ..	3×6	210	90	300
2. Home Paper and Oral ..	—	100	—	100
3. Laboratory work (in non-University examination subjects) ..	—	—	—	200
				600

IV. *Technology of Plastics**Papers*

Subject	Examination		Periodic	Total
	Hours	Marks	Tests Marks	
1. Costing and Industrial Administration and Relations ..	3	70	30	100
2. Macromolecular Chemistry ..	3	70	30	100..
3. Technology of Plastics ..	3	70	30	100
4. Processing of Plastics I ..	3	70	30	100
5. Design and Fabrication of Moulds ..	3	70	30	100
..	—	350	150	500

Practical and Oral

Subject	Examination		Periodic	Total
	Hours	Marks	Tests Marks	
1. Analysis and testing of Plastics ..	3×6	210	90	300
2. Home Paper and Oral ..	—	100	—	100
3. Laboratory work (in non-University examination subjects) ..	—	—	—	200
				600

V. *Technology of Pigments, Paints and Varnishes*
Papers

Subject	Examination		Periodic	Total
	Hours	Marks	Tests Marks	
1. Costing and Industrial Administration and Relations	3	70	30	100
2. Macromolecular Chemistry (same as for Plastics)	3	70	30	100
3. Technology of Pigments	3	70	30	100
4. Technology of Varnishes and Lacquers	3	70	30	100
5. Technology of Paints and Printing Inks	3	70	30	100
	—	350	150	500

VI *Technology of Pharmaceuticals and Fine Chemicals*
Papers

Subject	Examination		Periodic	Total
	Hours	Marks	Tests Marks	
1. Costing and Industrial Administration and Relations	3	70	30	100
2. Technology of Pharmaceuticals I	3	70	30	100
3. Technology of Pharmaceuticals II	3	70	30	100
4. Pharmaceutical Chemistry	3	70	30	100
5. Pharmacognosy	3	70	30	100
		350	150	500

Practical and Oral

Subject	Examination		Periodic	Total
	Hours	Marks	Tests Marks	
1. Preparation and Analysis of Pharmaceuticals	3×6	210	90	300
2. Pharmacognosy	1×6	70	30	100
3. Laboratory work (in non-University examination subjects)	—	—	—	200
				600

To pass the First Year B.Sc. (Tech.) Examination, a candidate must obtain at least 40 per cent of the marks in each head, except the head "Laboratory work (in non-University examination subjects)" in which he must obtain at least 50 per cent, and in addition, he must obtain at least 50 per cent of the total number of marks assigned to the whole examination. The minimum of 40 per cent must be obtained jointly in the written examination and the periodic tests.

To pass the Final Examination for the degree of B.Sc. (Tech.), a candidate must obtain at least 40 per cent of the marks in each head, at least 40 per cent of the marks in each practical examination, 50 per cent of the marks assigned for the Laboratory work, and in addition, he must obtain at least 50 per cent of the total number of marks assigned to the whole examination. The minimum of 40 per cent referred to above must be obtained jointly in the written or practical examination and the periodic tests.

Classes are awarded as under :—

Candidates obtaining 50 per cent and above but below 60 per cent of the total marks—Second Class.

Candidates obtaining 60 per cent and above but below 70 per cent of the total marks—First Class.

Candidates obtaining 70 per cent and above—Distinction.

(ii) *Master of Science (Technology)*

The M.Sc. (Tech.) degree can be taken by thesis only.

The degree of M.Sc. (Tech.) may be awarded to a candidate who has passed the examination for the B.Sc. (Tech.) or B.Chem. Eng. and who has subsequently carried out research in the University Department of Chemical Technology under the guidance of a University Teacher for at least two terms on the merits of a thesis dealing with a subject relating to (1) Textile Chemistry, (2) Chemical Engineering, (3) Food Technology, (4) Technology of Intermediates and Dyes, (5) Technology of Plastics, (6) Technology of Pigments, Paints and Varnishes, (7) Technology of Oils, Fats and Waxes, or (8) Technology of Pharmaceuticals and Fine Chemicals.

The degree of M.Sc. (Tech.) may be conferred on a candidate who has passed the examination for the degree of B.Sc. (Tech.) or the degree of B.Chem. Eng. at least two years previously, provided that he has been satisfactorily and continuously engaged in industry during that period and presents, under the guidance of a University Teacher, a thesis embodying the results of the work on which he has been engaged and which, in the opinion of the referee, is a contribution of value to industry and on which he satisfactorily undergoes a *viva voce* examination by an external examiner in conjunction with the Teacher under whom he has been receiving guidance.

(iii) *The degree of B.Chem. Eng.**Four year course in Chemical Engineering*

Under the Government of India scheme of expansion of the Department, a four-year course in Chemical Engineering leading to the degree of Bachelor of Chemical Engineering (B.Chem. Eng.) has been instituted. The qualification for admission is the Intermediate Examination in Science of the University of Bombay with Mathematics as the optional subject or the Intermediate Examination in Science of a University recognized by the University of Bombay in the group of Mathematics, Physics and Chemistry. The number of candidates to be admitted to the first year of the course is 20, and 6 seats are reserved for candidates from States other than the State of Bombay as follows:—

Rajasthan—3; Punjab—1; Saurashtra—1; Part “C” and “D” States—1.

The following are the details of the courses of study and subjects of the examination for the B.Chem. Eng. degree.

A candidate is required to pass four examinations, viz., the First, Second and Third Year Examinations in Chemical Engineering and the final examination for the degree of Bachelor of Chemical Engineering. The course of study for each of these examinations is of one year's duration.

Every candidate for the degree is required to work for at least one month in a machine shop during the vacation at the end of the second year of study, and for another two months in a chemical factory or works at the end of the third year of study, and shall submit satisfactory reports of such work to the Head of the Institution.

Every candidate is required to solve a question on design which shall be set by the Professors and Readers in Chemical Engineering in the Institution not less than three months prior to the final examination for the degree of B.Chem. Eng., at which it shall be considered under the subject heading “Home Paper”. For this subject head, no marks are allotted separately for class work.

The following are the details for the different examinations:—

First Year Examination in Chemical Engineering

	No. of Papers or Practicals	Final Exam. Hrs.	Total of Periodic Tests Hrs.	Marks
English ..	1	2	—	50
Physics ..	1	3	3	100
Applied Mechanics ..	1	3	3	100
Physics Laboratory ..	1	3	6	100
Mathematics I ..	2	6	6	200
Total marks ..				550

Second Year Examination in Chemical Engineering

	No. of Papers or Practicals	Final Exam. Hrs.	Total of Periodic Tests Hrs.	Marks
Chemistry, Inorganic ..	1	3	3	100
Chemistry, Organic ..	1	3	3	100
Chemistry, Physical ..	1	3	3	100
Mathematics II ..	1	3	3	100
Strength of Material ..	1	3	3	100
Drawing I & II ..	1	3	3	100
Mechanical Technology and Practice (Paper) ..	1	2	3	50
Mechanical Technology and Practice (Practical) ..	1	4	—	100
Chemistry Laboratory, Inorganic ..	1	6	6	100
Chemistry Laboratory, Organic ..	1	6	6	100
Chemistry Laboratory, Physical ..	1	6	6	100
Total marks ..				1,050

Cumulative passing.

Third Year Examination in Chemical Engineering

	No. of Papers or Practicals	Final Exam. Hrs.	Total of Periodic Tests Hrs.	Marks
Industrial Stoichiometry ..	1	3	3	100
Advanced Physical Chemistry ..	1	3	3	100
Chemical Engineering I ..	1	6	6	200
Chemical Engineering II ..	1	6	6	200
Heat Engines ..	1	3	3	100
General Engineering and Theory of Machines ..	1	3	3	100
Electrical Engineering ..	1	3	3	100
Elements of Economics ..	1	2	2	50
Chemical Engineering Laboratory ..	1	6	6	100
Technical Analysis (includ- ing Fuels) ..	1	6	6	100
Engineering Lab. (Mecha- nical and Electrical) ..	1	3	3	100
Total marks ..				1,250

Bachelor of Chemical Engineering (B.Chem. Eng.)
Examination

	No. of Papers or Practicals	Final Exam. Hrs.	Total of Periodic Tests Hrs.	Marks
Equipment Design Drawing.	1	3	3	100
Chemical Engineering				
Thermodynamics ..	1	3	3	100
General Chemical Technology.	1	3	3	100
Chemical Engineering				
Advanced I	1	3	3	100
Chemical Engineering				
Advanced II	1	3	3	100
Furnaces, Refractories and				
Physical Metallurgy ..	1	3	3	100
Costing and Industrial				
Administration and Rela- tions	1	3	3	100
Unit Operations Laboratory	1	6	6	100
Practice School or Group				
Problems	—		6	100
Home Paper (Thesis)	..	..	..	100
Total marks				1,000

N.B.—Certified journals containing records of practical work carried out by the candidates shall be submitted to the examiners, at the respective practical examination at each of the examinations.

Standard of Passing

To pass the First or the Second Year Examination in Chemical Engineering a candidate must obtain at least 40 per cent of the marks in each head and 40 per cent of the marks in each practical examination. The minimum of 40 per cent must be obtained jointly in the written or practical examination and the periodic tests.

To pass the Third Year Examination in Chemical Engineering or the final examination for the degree of B.Chem. Eng., a candidate must obtain at least 40 per cent of the marks in each head, at least 40 per cent of the marks in each practical examination, and in addition, he must obtain at least 50 per cent of the total number of marks assigned to the whole examination. The minimum of 40 per cent must be obtained jointly in

the written or practical examination and the periodic tests. At the final year examination for the degree of B.Chem. Eng. a candidate must also obtain at least 40 per cent of the total marks assigned for the subject "Practice School or Group Problem". The papers in Chemical Engineering I and Chemical Engineering II at the Third Year Examination in Chemical Engineering are treated as one head for the purpose of passing

Successful candidates at the Third Year Examination in Chemical Engineering and the final examination for the degree of B.Chem. Eng., shall be awarded classes as follows:—

Candidates obtaining 50 per cent and above but below 60 per cent of the total marks—Second Class.

Candidates obtaining 60 per cent and above but below 70 per cent of the total marks—First Class.

Candidates obtaining 70 per cent of the total marks and above—Distinction.

FACILITIES FOR RESEARCH IN THE UNIVERSITY DEPARTMENT OF CHEMICAL TECHNOLOGY

Students proceeding for the higher degrees of M.Sc. (Tech.) and Ph.D. in the Faculty of Technology are afforded facilities for carrying out research under the direction of the members of the staff in the various laboratories of the Department. Other qualified persons, intending to carry out research work within the purview of the Department, whether proceeding for a degree or not, are also admitted if accommodation is available.

The Department is fully equipped for chemical and technological research. A research laboratory for general work, an experimental dyeing laboratory, a textile auxiliaries laboratory, a dyehouse carrying a complete range of semi-scale plant for all purposes from singeing to finishing and an optics laboratory are available, in which any problem in the chemical technology of textiles can be investigated. The Pharmaceutical, Food, Dyes and Fuel laboratories provide facilities and accommodation for several workers in the subjects. The Chemical Engineering Laboratories, which include a room for high pressure research and contain unit plant of every type, offer opportunities for carrying out semi-scale work on chemical products and works processes. Laboratories for "Oils, Fats and Waxes", "Plastics", "Pigments, Paints and Varnishes" and Inorganic and Technical Chemistry have been equipped. Special apparatus and small-scale plant can be fabricated in the workshop. The departmental library possesses a comprehensive collection of books and periodical literature in English and German on the various branches of Chemistry and Chemical Technology and receives over 200 current periodicals.

Copies of the publications of the Department are made available to subscribers for an annual payment of Rs. 10.

Industrial Investigations and Analytical work.—In addition to its normal academic functions of teaching and research the Department acts as a central research and analytical laboratory for the benefit of the textile and chemical industries and it co-operates with mills and factories in carrying out research on their behalf or investigating any technical problems that may arise in the course of their work. In the equipment of the Department this object has been kept in view and unit plant installed so that semi-works scale experiments may be carried out on problems relating to textile processing and to the manufacture and application of chemical products.

While routine chemical analyses of every kind are undertaken on behalf of industry in general, the Department functions in particular as a test house for cotton mills, enabling them to obtain independent information on the dyes, chemicals and auxiliaries used in the textile industry. Regulations governing the acceptance of such work and a schedule of charges may be obtained from the office of the Department.

SCHOLARSHIPS AND FELLOWSHIPS IN THE UNIVERSITY DEPARTMENT OF CHEMICAL TECHNOLOGY

A scholarship of Rs. 30 per month is awarded annually to an entrant to each of the B.Sc. (Tech.) Courses. These scholarships are tenable for one year and are awarded to the candidates entering the respective courses, who have obtained the highest total marks at the B.Sc. Examination of the Bombay University in that year.

Scholarships of Rs. 30 per month each and tenable for one year are also awarded annually on the results of the first year's work to the students who have obtained the highest number of marks in the respective courses and who in addition have not failed in any of the departmental examinations.

From 1956 the scholarships will be awarded to the students who pass the First Year B.Sc. (Tech.) examination who obtain the highest number of total marks in the respective courses and continue their studies in the Department.

A scholarship of Rs. 30 per month, tenable for one year, is awarded annually to a student of the First Year Chemical Engineering Course for B.Chem. Eng., who has obtained the highest total marks at the Intermediate Science Examination of the Bombay University in that year. Students who pass Inter-Science with exemption in the language examination under R. 89 will not be eligible.

Scholarships of Rs. 30 per month each and tenable for one year are also awarded annually to the students who obtain the highest number of

marks at the First, Second and Third Examinations in Chemical Engineering, and continue their studies in the Department.

Singhaneer Fellowships.—There are ten Singhaneer Research Fellowships of Rs. 100 each per month tenable for one year. Five are awarded to first year research students in order of marks secured in the B.Sc. (Tech.) Examination, equitable distribution among the various branches of chemical technology being made as far as possible. The remaining five Fellowships are awarded to students who have shown satisfactory progress in their first year's research work, and who wish to continue research in the Department for a second year. If there are no qualified applicants for one or more of the above Fellowships, such Fellowships may be made available to other graduates of the Department with the requisite qualifications.

The Byramji Ratanji Lentin Scholarship, of the value of Rs. 388 per annum and tenable for one year, is awarded to the candidate who passes the B.Sc. (Tech.) Examination with the highest number of marks in the Textile Chemistry branch and continues his studies for the M.Sc. (Tech.) Examination.

The Amelia, wife of Dr. A. G. Viegas, Scholarship, of the value of Rs. 166 per annum and tenable for one year, is awarded to the candidate who passes the B.Sc. (Tech.) Examination with the highest number of marks in the Chemical Engineering branch and continues his studies for the M.Sc. (Tech.) Examination.

From 1955, the scholarship is awarded at the B.Chem. Eng. Examination.

The Seth Rao Bahadur Poonamchand Karamchand Kotawala Gold Medal of the approximate value of Rs. 340 is awarded annually to the candidate who passes the B.Sc. (Tech.) Examination with Plastics, Paints and Varnishes as his special subject and obtains the highest number of marks in the aggregate in his group.

(From 1952, the Medal is awarded alternately for Technology of Plastics and Technology of Pigments, Paints and Varnishes.)

The Mrs. Soonabhai Dadabhai Master Scholarships (two), each of the value of Rs. 285 per annum and tenable for one year, are awarded to the candidates who pass the B.Sc. (Tech.) Examination in (i) Food Technology and (ii) Technology of Pharmaceuticals and Fine Chemicals with the highest number of total marks on condition that they continue their studies for the M.Sc. (Tech.) degree.

The Chaturbhuj Jiwandas Research Fellowship, of the value of Rs. 1,500 per annum tenable for one year in the first instance and renewable at the discretion of the Syndicate, is awarded to the most deserving candidate who has passed the M.Sc. (Tech.) Examination of the University in the twelve months preceding the 1st December of year of award, and who continues to work in the Department on an approved problem.

The Bombay Millowners' Association Research Assistantship in Textile Chemistry in the grade of Rs. 200-20-300 p m. to be held by a graduate of the Department holding the Ph.D. degree.

The C.S.I.R. Fellowships in Dyestuff Technology.—Six research fellowships of the value of Rs. 100 each per month, tenable for one year, are awarded to B.Sc. (Tech.) graduates for research in Dyestuff Technology.

Research Fellowships under the Government of India Scheme of Expansion.—Eight research fellowships of the value of Rs. 100 each per month, tenable for one year, are awarded to B.Sc. (Tech.) graduate for carrying out research.

The Raja Ratna Kapilram H. Vakil Memorial Scholarship, of the value of the annual income of the endowment of Rs. 12,075 tenable for one year is awarded annually by the Syndicate to the best qualified graduate of the University of Bombay in Chemical Engineering during the year who undertakes research in (1) Salt or (2) Salt and Allied Chemicals or failing such a candidate to the candidate who undertakes research in Chemical Engineering in the Department.

Twelve senior research scholarships each of the value of Rs. 200 per month for advanced research in Technology awarded by the Government of India, Ministry of Education, tenable for a period of three years are available in the Department.

Subsidised Research Fellowships.—Several fellowships for work on specified industrial problems subsidised by Government and Industry are usually available every year.

XI. ARCHITECTURE

Bachelor of Architecture (B.Arch.) :—

A candidate for the degree of Bachelor of Architecture must have passed the Matriculation or the Entrance Examination of this University, or the S.S.C. Examination of the S.S.C. Examination Board of the Bombay State with the prescribed subjects and the prescribed percentages of marks or an examination recognised as equivalent to the Matriculation and, in addition must have studied Drawing up to the standard prescribed for the Intermediate Examination in Drawing held by the Government of Bombay.

The course is of five years' duration and a candidate has to pass five examinations—three college examinations and two University examinations as follows. The course for each examination is of one year's duration.

(i) *First Year Examination in Architecture*

This Examination will be held by a College of Architecture recognized by the University of Bombay.

1. Mathematics I.
2. Science I.
3. Design I.
4. History of Culture I.
5. Drawing I.
6. English
7. Building Construction and Materials I
8. Workshop Practice I (*Certificate only*).

To pass the Examination the candidate must obtain 45 per cent of the full marks in each subject and 50 per cent of the total marks obtainable.

(ii) *Second Year Examination in Architecture*

This Examination will be held by a College of Architecture recognized by the University of Bombay.

Candidates will be examined by the College in subjects 1 to 8 specified below, and each candidate must produce a certificate from the Head of College of Architecture showing that he has satisfactorily completed the course prescribed for subject 9 (Workshop Practice II) in which there is no examination.

1. Mathematics II.
2. Applied Mechanics.
3. Design II
4. History of Culture II.
5. Drawing II.
6. History of Architecture I.
7. Building Construction and Materials II.
8. Surveying
9. Workshop Practice II (*Certificate only*).

To pass the Examination the candidate must obtain 45 per cent of the full marks in each subject and 50 per cent of the total marks obtainable.

(iii) *Intermediate Examination in Architecture*

The Intermediate Examination in Architecture will be held by the University.

Candidates will be examined by the University in the subjects 1 to 7 specified below. Each candidate must produce a certificate from the Head of the College of Architecture showing that he has satisfactorily completed

the course prescribed for subject 8 (Workshop Practice III) in which there is no examination.

1. History of Culture III—1 paper of 100 marks—3 hours' duration.
2. History of Architecture II— 1 paper of 100 marks—3 hours' duration.
3. Design III—1 paper of 300 marks—3 days' duration, 6 hours' a day (*first 6 hours enlodge*).
4. Construction—1 paper of 100 marks—3 hours' duration.
5. Theory of Structures—1 paper of 100 marks—3 hours' duration.
6. Materials and Specifications—1 paper of 100 marks—3 hours' duration.
7. Elementary Sanitation—1 paper of 100 marks—3 hours' duration.
8. Workshop Practice III—(*College Certificate only*).

To pass the Examination the candidate must obtain 45 per cent of the full marks in each subject and 50 per cent of the total marks obtainable.

Those of the candidates who obtain 55 per cent of the total marks obtainable shall be placed in the Second Class.

Those of the candidates who obtain 66 per cent of the total marks obtainable shall be placed in the First Class.

(iv) *Fourth Year Examination in Architecture*

This Examination will be held by a College of Architecture recognized by the University of Bombay.

Candidates will be examined by the College in the subjects: 1 to 6 specified below :

1. Town Planning and Civic Architecture I.
2. Architectural Accoustics.
3. Advanced Building Construction I.
4. Advanced Structural Design I.
5. Quantity Surveying.
6. Design IV.

To pass the Examination the candidate must obtain 45 per cent of the full marks in each subject and 50 per cent of the total marks obtainable.

(v) *Bachelor of Architecture*

This Examination will be held by the University.

Candidates will be examined by the University in the subjects 1 to 8 below :

1. Design V—1 paper of 300 marks—4 days' duration 6 hours, a day. (*First 6 hours' enlodge*).
2. Advanced Building Construction II—1 paper of 100 marks—3 hours' duration.

3. *Advanced Structural Design II*—1 paper of 100 marks—3 hours' duration.
4. *Malinaband Specification*—1 paper of 100 marks—3 hours' duration.
5. *Services and Equipment*—1 paper of 100 marks—3 hours' duration.
6. *Town Planning and Civic Architecture II*—1 paper of 100 marks—3 hours' duration.
7. *Sociology and Building Economics*—1 paper of 100 marks—3 hours' duration.
8. *Professional Practice*—1 paper of 100 marks—3 hours' duration.
9. *Thesis*—100 marks.

To pass the Examination the candidate must obtain 45 per cent of the full marks in each subject and 50 per cent of the total marks obtainable.

Those of the candidates who obtain 55 per cent of the total marks obtainable shall be placed in the Second Class.

XII. LAW COURSE

Revised courses of study for the degree of Bachelor of Laws

(New Rules)

Candidates for the degree of LL.B. must have passed the Intermediate Arts, Intermediate Science or the Intermediate Commerce Examination of this University or the Intermediate Arts, Science or Intermediate Commerce Examination of any other University or Board of Intermediate Education recognized as equivalent to the corresponding examination of this University and will be required to pass three examinations, the first to be called "Law Preliminary Examination" the second to be called the "1st Examination for the Degree of LL.B." and the third to be called the "2nd Examination for the Degree of LL.B."

Candidates who have passed the Bachelor's Degree Examination of this University in the Faculties of Arts, Commerce, Science or of any other University recognized as equivalent thereto will not be required to pass the Law Preliminary Examination, and will be entitled to enter upon the course for the 1st Examination for the Degree of LL.B.

Candidates who have passed the Bachelor's Degree Examination of this University in Science, Agriculture, Medicine or Engineering or in any other Faculty except Arts or Commerce, Science of any other University recognized as equivalent thereto, will be eligible for admission to the Law Course but will be required to pass the Law Preliminary Examination as mentioned in 0.325A.

(i) *Law Preliminary Examination Course*

Candidates are required to answer the following five papers each carrying 100 marks and of three hours' duration :—

Paper I—English Texts—Prose and Poetry.

Paper II—English—Essay Precis and Composition.

Paper III—Outlines of Social, Economic and Constitutional History of India from 1773 to the 26th January, 1950.

Paper IV—History and Development of Social Institutions.

Paper V—Theory of Politics.

To pass the Examination the candidate must obtain one-third of the full marks in each paper. Those obtaining 45 per cent or more in the aggregate are declared to have passed the Examination in the Second Class. Those obtaining 60 per cent or more in the aggregate are declared to have passed the Examination in the First Class.

(ii) *First LL.B. Examination Course*

Candidates are required to answer the following six papers, each carrying 100 marks and of three hours' duration :—

Paper I—Law of Crimes with special reference to the Indian Penal Code.

Paper II—The Law of Torts.

Paper III—Principles of the Law of Contract with special reference to the first 75 Sections of the Indian Contract Act.

Paper IV—The Principles of the Law of Indemnity, Bailments, Surety, Agency, Sale of Goods, Partnership and Negotiable Instruments.

Paper V—Elements of Constitutional Law.

Paper VI—Indian Constitution.

To pass the Examination the candidate must (a) obtain one-third of the full marks in each paper, and (b) obtain one-half of the total marks obtainable. Those of the successful candidates who obtain two-thirds or more of the total marks obtainable are placed in the First Class.

(iii) *Second LL.B. Examination Course*

No candidate is admitted to the Examination unless he has passed the First Examination for the Degree of LL.B. in this University and after passing the said examination has kept two terms in a Law College affiliated to this University.

Candidates are required to answer the following six papers, each carrying 100 marks and of three hours' duration :—

Paper I—Hindu Law.

Paper II—Mohammedan Law and the Indian Succession Act.

Paper III—Law of Property, Easements and Registration Act.

Paper IV—Equity, Trust and Specific Relief.

Paper V—Elements of Public International Law and Jurisprudence.

Paper VI—Private International Law (Conflict of Laws).

To pass the Examination the candidate must (a) obtain one-third of the full marks in each paper, and (b) obtain one-half of the total marks obtainable. Those of the successful candidates who obtain two-thirds or more of the total marks obtainable are placed in the First Class.

(iv) *Master of Laws (LL.M.)*

Admission to the courses of study for this degree is granted to Law Graduates of this or of certain other recognized Universities and the course extends over two academic years. Every candidate for the Degree of LL.M. is required (1) to register himself as a post-graduate student of the University, (2) to get himself enrolled as a regular student of a Law College affiliated to the University and (3) to report himself daily to the Principal of the College. Candidates are required to study and be examined in any one of the following four branches:—

Branch I .. (1) Jurisprudence (1 paper), (2) Roman Law (1 paper), (3) International Law, Public and Private (1 paper), (4) Principles of Legislation (1 paper), (5) Constitutional Law (British and Indian) (1 paper), and (6) Essay (1 paper).

Branch II .. (1) Hindu Law (3 papers) or Muhammadan Law (3 papers), (2) Testamentary and Intestate Succession (excluding Hindu and Muhammadan Law) (1 paper), (3) Marriage, Divorce and Guardianship (excluding Hindu and Muhammadan Law) (1 paper), and (4) Essay on Hindu or Muhammadan Law (1 paper).

Branch III .. (1) Real property, etc. (2 papers), (2) Principles of Equity with special reference to the Law of Trusts and Specific Relief (1 paper), (3) The Law of Easements and Prescription (1 paper), (4) Customary and Statute Law relating to Land Tenure in British India (1 paper), and (5) Essay (1 paper).

Branch IV .. (1) The Law of Contracts (including Sale of Goods Agency and Partnership) (1 paper), (2) Companies and Insolvency (1 paper), (3) Mercantile and Maritime Law (1 paper), (4) The Law of Torts (1 paper), (5) Law of Crimes (1 paper), and (6) Essay (1 paper).

The Degree of LL.M. may be taken either by written examination or by thesis.

The examination in each branch consists of six papers. To pass the examination, candidates must obtain 50 per cent in each of the papers. Those who obtain 66 per cent of the aggregate are placed in the First Class.

XIII. MEDICINE

(i) *Degrees of Bachelor of Medicine and Bachelor of Surgery* (M.B., B.S.), (old course).

For admission to a course of study for these degrees, a candidate was required to have passed the Intermediate Examination in Science of this University in the group of Physics, Chemistry and Biology or an equivalent examination of any other recognized University. Candidates for these degrees are required to pass three examinations:—(i) The First M.B., B.S. Examination, (ii) The Second M.B., B.S. Examination, and (iii) The Third M.B., B.S. Examination.

(a) *The First M.B., B.S. Examination.*—Before presenting themselves for this examination, candidates must have attended complete courses in (i) Human Anatomy and Embryology, (ii) Physiology, (iii) Organic Chemistry and Bio-Physics. They are examined in Anatomy including Embryology, Descriptive and Practical, and Physiology including Histology and Chemical and Experimental Physiology and in Organic Chemistry and Bio-Physics. The examination consists of two written papers and a Practical Examination or an oral test or both in each subject. For a pass, a candidate must obtain in each subject, 50 per cent of the full marks in the clinical, practical and oral tests together and 50 per cent of the full marks in the written test.

(b) *The Second M.B., B.S. Examination.*—Candidates are examined in the following subjects: Materia Medica, Pharmacology and Practical Pharmacy. The examination consists of one written paper and one practical or oral examination in each subject. The passing standard is the same as at the First M.B., B.S. Examination.

(c) *The Third M.B., B.S. Examination.*—Before presenting himself for this examination, each candidate must have attended the course in Medicine, Surgery, Midwifery and Diseases of Women, Ophthalmology, Pathology, Forensic Medicine and Preventive Medicine. He must also have received systematic and clinical instruction in Diseases of the Ear, Nose and Throat, Disease of the Skin, Radiology, Dentistry, Tuberculosis, Venereal Diseases and Anaesthetic. He must further have attended the prescribed Hospital Practice.

The subjects in which the candidates are examined are as under:—

(1) *Pathology and Bacteriology*—

The examination in Pathology consists of:

- (a) One paper of three hours' duration, carrying 100 marks.
- (b) A practical examination, carrying 50 marks.
- (c) An oral examination, carrying 50 marks.

(2) *Forensic Medicine*—

The examination in Forensic Medicine consists of:

- (a) A paper of three hours' duration, carrying 100 marks.
- (b) An oral examination, carrying 100 marks.

(2A) *Preventive Medicine*—

The examination in Preventive Medicine consists of:

- (a) A paper of three hours' duration, carrying 100 marks.
- (b) An oral examination, carrying 100 marks.

(3) *Medicine*—

The examination in Medicine consists of:

- (a) Two papers, each of three hours' duration, carrying 100 marks each.
- (b) A clinical examination in Medicine, carrying 100 marks consisting of the following:
 - (i) An examination of a patient and a written report thereon; and
 - (ii) A short examination on not less than two cases.
- (c) A practical and oral examination, carrying 100 marks.

(4) *Surgery*—

The examination in Surgery consists of:

- (a) Two papers, each of three hours' duration, carrying 100 marks each.
- (b) A clinical examination, carrying 100 marks consisting of:
 - (i) An examination of a patient and a written report thereon; and
 - (ii) A short examination on not less than two cases.
- (c) A practical and oral examination bearing on Surgical, Anatomy, Pathology, use of surgical appliances and operations on the cadaver, carrying 100 marks.

(5) *Ophthalmology*—

The examination in Ophthalmology consists of:

- (a) A paper of three hours' duration, carrying 100 marks.
- (b) A clinical and oral examination, carrying 100 marks.

(6) *Midwifery and Gynaecology*—

The examination in Midwifery and Gynaecology consists of:

- (a) A paper of three hours' duration, carrying 100 marks.
- (b) A clinical examination, carrying 50 marks.
- (c) A practical and oral examination, carrying 50 marks.

For a pass, a candidate must obtain 50 per cent of the full marks in the clinical, practical and oral tests taken together and 50 per cent of the full marks in the written test.*

* The First, Second and Third M.B., B.S. Examination under the Old Rules will be held for the last time in October, 1955, April, 1959 and April, 1961 respectively.

(ii) *Degrees of Bachelor of Medicine and Bachelor of Surgery*
(New Rules)

For admission to the courses of study for these degrees, candidates must have passed the Intermediate Examination in Science of this University with the subjects Physics, Chemistry and Biology or an examination recognised by the University as equivalent thereto, and must have attained the age of 17 years on or before the 10th November, of the year in which they join the college, or on the day of the commencement of the second term, whichever is later. Candidates will be required to undergo a period of certified study extending over four and a half academic years. After a period of study extending over one and a half academic years, in the subjects prescribed for the First M.B., B.S. Examination, the candidate will be entitled to appear for the First M.B., B.S. Examination. After passing the First M.B., B.S. Examination, candidates will be required to spend three years in a continuous study of the clinical group of subjects and pass the Second M.B., B.S. Examination before being entitled to appear in the subjects for the Third M.B., B.S. Examination. After passing the Final M.B., B.S. Examination, candidates shall, in order to qualify for the M.B., B.S. Degrees, undergo as interns 12 months' post-examination training in a recognised institution under a medical officer or practitioner recognised by the University or the Medical Council of India for the purpose. Three months at least of this internship shall be in Public Health Work, preferably in the rural areas under an approved Medical Officer of Health. (The details regarding internship training are still under the consideration of the University authorities.)

(a) *First M.B., B.S.*

Before presenting themselves for this examination candidates must have completed the following courses to the satisfaction of the Heads of Medical Colleges.

Candidates before presenting themselves for the First Examination shall produce certificates of:—

(i) *Human Anatomy and Embryology—*

(a) A course of demonstrations on Human Anatomy including Histology, Elements of Human Embryology and Principles of Genetics *with a stress on the fundamental and basic principles of Anatomy with a view to making this study useful for the later study of clinical subjects*, extending over three academic terms.

(b) A course of dissections extending over three academic terms. The candidates must have dissected the whole human body to the satisfaction of their teachers.

(c) A practical course in Histology of the tissues of the human body and the principles of Histological technique excluding Microtome work extending over a period of three academic terms.

(ii) *Human Physiology*—

(a) A course of lectures and demonstrations on Physiology, including Bio-Chemistry and Bio-Physics, extending over three academic terms.

(b) A practical course in Experimental-Physiology, Bio-Chemistry and Bio-Physics, extending over three academic terms.

(iii) *Normal Psychology*—

A course of instruction in Elementary Normal Psychology.

(iv) *The normal reactions of the body to injury and infection as an introduction to General Pathology and Bacteriology.*

(v) *Elements of the methods of clinical examination, including the use of the common instruments and the examination of body fluids, with demonstrations on both normal and abnormal living subjects.*

The Examination will consist of—

(i) Human Anatomy (including Histology), Elements of Human Embryology and Principles of Genetics.

(a) Two written papers, each of three hours' duration, carrying 100 marks each.

(b) A practical and an oral test, carrying 200 marks.

(ii) Human Physiology (including Experimental Physiology), Bio-Chemistry and Bio-Physics.

(a) Two written papers, each of three hours' duration, carrying 100 marks each.

N.B.—Each paper shall be divided into two equal sections. One of the four sections shall be devoted to Bio-Chemistry and Bio-Physics.

(b) A practical and an oral test, carrying 200 marks.

(b) *Second M.B., B.S.*

Before presenting themselves for this examination candidates must have completed the following courses to the satisfaction of the Head of a Medical College :

(i) Pharmacology, including Pharmaco-therapeutics.

A course of lectures and demonstrations, extending over two terms.

(i) *Practical Pharmacy*—

A course of demonstrations and practical work extending over one term.

(ii) *Pathology and Bacteriology*—

(a) A course of lectures, demonstrations and practical work in Pathology, extending over two terms.

(b) A course of lectures, demonstrations and practical work in Bacteriology and Elementary Parasitology, extending over two terms.

(c) A course of instruction in Chemical Pathology and in Clinical Pathology and Bacteriology.

(d) A certificate of having assisted in the conduct of at least ten autopsies as a *post-mortem* clerk.

Candidates will be required to submit to the examiners full records of ten autopsies which they have attended and which have been certified by the teachers in that subject.

(iii) *In Forensic Medicine and Toxicology—*

(a) A course of instruction in Forensic Medicine and Toxicology, including demonstrations, extending over one term.

(b) Candidates will be required to produce a certificate of having attended six medico-legal autopsies.

The Examination will consist of—

(i) *Pharmacology, including Pharmaco-therapeutics—*

(a) A written paper of three hours' duration, carrying 100 marks.

(b) A practical examination in Pharmacy as well as a practical and oral tests or both in Pharmacology, carrying 100 marks.

(ii) *Pathology and Bacteriology—*

(a) One paper of three hours' duration, carrying 100 marks.

(b) Practical examination, carrying 60 marks.

(c) An oral examination, carrying 40 marks.

(iii) *Forensic Medicine and Toxicology—*

(a) One paper of three hours' duration, carrying 100 marks.

* (b) An oral examination, carrying 100 marks.

(c) *Third M.B., B.S.*

Before presenting themselves for this examination candidates must have completed the following courses to the satisfaction of the Head of a Medical College :

(i) In Medicine, including Preventive and Social Medicine and Therapeutics.

A course of lectures and clinical demonstrations as laid down in R. 334P, extending over four academic terms.

(ii) In Surgery, including E., N. & T. and Ophthalmology and Applied Pathology.

A course of lectures and clinical demonstrations in Surgery, as laid down in R. 334P, extending over four academic terms.

(iii) In Midwifery and Gynaecology including Applied Pathology.

* There shall be four examiners for *viva voce* examination one pair examining the candidate in Forensic Medicine and the other in Toxicology.

A course of lectures and clinical demonstration, as laid down in R. 334P, extending over two academic terms.

The candidates shall also present certificates of having passed the college tests in (i) Ear, Nose and Throat and (ii) Ophthalmology referred in R. 334P.

The Examination will consist of—

1. *Medicine, including Preventive and Social Medicine and Therapeutics and Applied Pathology—*

(a) Two papers, each of 3 hours' duration, carrying 100 marks each of which one section carrying 50 marks shall be devoted to Preventive and Social Medicine.

(b) A clinical examination in Medicine, carrying 100 marks, consisting of the following :

(i) Long case :—*Viva voce* examination on the findings of a case.

(ii) A short examination on not less than two short cases :—

Viva voce on the findings of each case.

(c) A practical and oral examination carrying 100 marks which will also include Preventive and Social Medicine.

2. *Surgery, including E. N. & T. and Ophthalmology and Applied Pathology—*

(a) Written examination—2 papers, each of three hours' duration and carrying 100 marks each.

Note.—In Paper I there shall be a compulsory question on Ophthalmology with an alternative and in Paper II, there shall be one question on E., N. & T. with an alternative.

(b) A clinical examination in Surgery, etc., carrying 100 marks, consisting of the following :—

(i) Long case :—*Viva voce* examination on the finding of a case.

(ii) A short examination on not less than two short cases :—

Viva voce on the findings of each case.

(c) A practical and oral examination bearing on Surgical Anatomy, Pathology, use of surgical appliances and operations, carrying 100 marks.

3. *Midwifery, Gynaecology and Applied Pathology—*

(a) A paper of three hours' duration, carrying 100 marks.

(b) A clinical examination, carrying 50 marks.

(c) A practical and oral examination, carrying 50 marks.

N.B.—1. In the written paper 40 marks should be allotted to Gynaecology and 60 marks to Midwifery, Hygiene of Infants and diseases of the new born.

2. In the examination of Gynaecology—in written as well as practical and oral—details of major operational technics should not be asked.

To pass each of the above examination, a candidate must obtain in each subject 50 per cent of the full marks in the clinical, practical and oral tests taken together and 50 per cent of the full marks in the written test. In order to obtain distinction in any subject a candidate must pass the examination at the first attempt in all the subjects, and obtain 75 per cent of the full marks in the subject.

Up to and inclusive of the academic year commencing from June 1956, holders of the L.C.P.S., or L.M.P. diploma of the State of Bombay or of Sind before partition and holders of corresponding diplomas of other States or D.M.S. diploma of the State of Madras will be permitted to enter upon the condensed course for the M.B., B.S. degrees and appear for the First, Second and Third M.B., B.S. Examinations one after another, on their producing a certificate that they have pursued at an affiliated college to the satisfaction of its head courses specially organized thereat for such students, provided always that such students shall have passed the Matriculation Examination or an examination recognized as equivalent thereto in the following subjects:—

- I. English (Language or Literature).
- II. Mathematics (Elementary or Additional).
- III. A language other than English.
- IV. Any other subject (except religious knowledge).

and shall further have passed the Intermediate Examination in Science in the written part and the practicals of this University with Biology as their optional subject, or an equivalent examination of another recognized University in the subjects of Physics, Chemistry and Biology. The subject of Chemistry should include Organic Chemistry, both theoretical and practical, as a part of the syllabus for the said examination. Candidates who pass the Final M.B., B.S. Examination under the provisions of this Ordinance shall be required to undergo training for a period of 12 months in the manner prescribed subsequent to their passing the Final M.B., B.S. Examination and the degrees shall not be conferred on them unless they satisfy the requirements of the said Ordinance, provided however, that persons who pass the Final M.B., B.S. Examination under the provisions of this Ordinance up to and inclusive of the examination to be held in April, 1957 will be exempted from the provisions of and will be deemed to have qualified for the M.B., B.S. Degrees on their passing the Final M.B., B.S. Examination.

Provided, however, that the holders of the L.C.P.S. or L.M.P. Diploma of the State of Bombay shall be deemed eligible for admission to the M.B., B.S. Course under this Ordinance notwithstanding that Organic Chemistry may not have formed part of the syllabus in Chemistry at the Intermediate Science Examination passed by them.

A holder of the M.C.P.S. Diploma will be permitted to appear without being required to keep terms, for the first and second M.B., B.S. Exami-

nations at the same time or one after another, and will be permitted to appear for the third M.B., B.S. Examination without keeping terms, only after passing the 1st and 2nd M.B., B.S. Examinations.

Candidates who pass the Final M.B., B.S. Examination under the provisions of this Ordinance shall be required to undergo post examination training for a period of 12 months in the manner prescribed subsequent to their passing the Final M.B., B.S. Examination and the degrees shall not be conferred on them unless they satisfy the requirements of the said Ordinance. However persons who pass the Final M.B., B.S. Examination under this provision up to and inclusive of the examination to be held in April, 1957 will be exempted from the post examination training and will be deemed to have qualified for the M.B., B.S. Degrees on their passing the Final M.B., B.S. Examination.

(iii) *Degree of Bachelor of Dental Surgery (B.D.S.) (New Rules)*

For the admission to the courses of study for this degree a candidate must have passed the Intermediate Examination in Science of this University with the subjects of Physics, Chemistry and Biology or an examination recognized by the University as equivalent thereto.

Candidates will be required to undergo a period of study extending over four academic years, and to pass four examinations, viz., the First, the Second, the Third and the Final Examination for the Degree of Bachelor of Dental Surgery. Following are the subjects for the four examinations leading up to the B.D.S. Degree.

(a) *First B.D.S.*

1. *General Human Anatomy including Histology*—1 paper of 3 hours' duration and 1 practical and oral, each carrying 100 marks.
2. *General Human Physiology*—1 paper of 3 hours' duration and 1 practical and oral, each carrying 100 marks.
3. *Dental Materials*—1 paper of 3 hours' duration, carrying 100 marks.

(b) *Second B.D.S.*

1. *General and Dental Materia Medica*—1 paper of 3 hours' duration and 1 practical and oral, each carrying 100 marks.
2. *General Pathology and Bacteriology*—1 paper of 3 hours' duration and 1 practical and oral, each carrying 100 marks.
3. *Human Dental Anatomy and Human Dental Physiology with Dental Histology*—1 paper of 3 hours' duration and 1 practical and oral, each carrying 100 marks.
4. *Medicine*—1 paper of 3 hours' duration and 1 clinical and oral, each carrying 100 marks.
5. *General Surgery*—1 paper of 3 hours' duration and 1 clinical and oral, each carrying 100 marks.

(c) *Third B.D.S.*

1. *Dental Pathology and Bacteriology*—1 paper of 3 hours' duration and 1 practical and oral, each carrying 100 marks.
2. *Dental Jurisprudence and Practice—Management and Dental History*—1 paper of 3 hours' duration, carrying 100 marks.

(d) *Final B.D.S.*

1. *Dental Prosthesis including Crown and Bridge Prosthesis*—1 paper of 3 hours' duration and 1 practical and oral, each carrying 100 marks.
2. *Pedodontia and Orthodontia*—1 paper of 3 hours' duration, carrying 100 marks.
3. *Operative Dentistry*—1 paper of 3 hours' duration and 1 practical and oral, each carrying 100 marks.
4. *Oral Surgery, Exodontia, Anaesthesia*—1 paper of 3 hours' duration and 1 practical and oral, each carrying 100 marks.
5. *Periodontia and Dental Radiology*—1 paper of 3 hours' duration, carrying 100 marks.

To pass each of the above examination, a candidate must obtain in each subject 50 percent of the full marks obtainable in the written and practical and oral tests, if any, separately.

Exemptions

Candidates who have passed the First Examination for the Degree of M.B., B.S. will be exempted from examination in the papers in (i) General Human Anatomy and (ii) General Human Physiology of the First Examination for the Degree of B.D.S. and will be permitted to complete the course after three years' study at a Dental College affiliated to this University. They will be permitted to appear for the First Examination in the subject of Dental Materials and in the subject of the Second Examinations for the Degree of B.D.S. in one and the same examination season, after keeping attendance for a period of two terms, and on their thereat will be permitted to proceed for the courses of study for the Third and the Final Year Examinations for the Degree of B.D.S. in accordance with the regulations relating to these examinations.

Candidates who have appeared for the First M.B., B.S. Examination, but who have failed to pass thereat will be permitted to appear for the First Examination for the Degree of B.D.S. after keeping attendance for one term at a Dental College affiliated to this University.

Holders of the L.D.S. (C.P.S.) Diploma and the L.D.Sc. Diploma awarded by the Dental Board of the Nair Hospital, Dental College, Bombay will be permitted to appear for the First and the Second Examinations for the Degree of B.D.S. in the same examination season after keeping attendance for a period of one term and on their passing thereat for the Third and the Final Examinations for the Degree of B.D.S. in the

same examination season after keeping attendance for one term at a Dental College affiliated to this University, provided that they satisfy the requirements regarding the minimum qualifications, for admission to the B.D.S. course mentioned above.

Candidates who hold the Degree of L.M. & S., or M.B., B.S. of this University, or an equivalent qualification of another University or Licensing Body will be permitted to appear for the First and the Second Examinations for the Degree of B.D.S. in one and the same examination season after keeping attendance for a period of two terms in a Dental College affiliated to this University, and will be required to pass in the subjects of Dental Materials only at the First Examination, and in the subject of (i) General and Dental Materia Medica and (ii) Human Dental Anatomy and Human Dental Physiology with Dental Histology at the Second Examination for the Degree of B.D.S. and on their passing thereat will be permitted to appear for the Third and the Final Examinations for the Degree of B.D.S. in one and the same examination season after keeping attendance for a period of two terms.

(iv) *M.D. Examination*

(*New Rules*)

Every candidate for the Degree of Doctor of Medicine must have taken the Degrees of Bachelor of Medicine and Bachelor of Surgery of this University or of any University recognized by this University, or of Licentiate of Medicine and Surgery of this University, and must have passed the examination not less than three years previously.

N.B.—Registration as a post-graduate student is a condition precedent to the commencement of post-graduate courses.

The examination for the Degree of Doctor of Medicine shall comprise the following Branches:—

- I—Medicine and Therapeutics.
- II—Pathology and Bacteriology.
- III—Obstetrics, Gynaecology and Diseases of Infancy.
- IV—Pharmacology.
- V—Pediatrics.
- VI—Tuberculosis.

The examination for the Degree of M.D., in each of the above branches, is in two parts, viz., Part I and Part II.

No candidate is admitted to the Examination for Part II unless he has passed the examination for Part I, but a candidate may enter upon the course for Part II before passing the examination for Part I.

Part I

No candidate will be admitted to this examination unless he has completed one year after registering himself as a student for the M.D. Degree.

The Examination for Part I in the Branches I, III, V, and VI shall consist of three papers, as under, each of two hours' duration :

Paper I—Applied Anatomy and Applied Physiology, (in relation to the particular Branch for which the candidate has registered).

Paper II—Applied Pharmacology, (in relation to the particular Branch for which the candidate has registered).

Paper III—Pathology and Bacteriology, (in relation to the particular Branch for which the candidate has registered).

The Examination for Part I, in Branches II and IV shall consist of two papers, as under, each of two hours' duration :

Paper I—Applied Anatomy, (in relation to the particular Branch for which the candidate has registered).

Paper II—Applied Physiology, (in relation to the particular Branch for which the candidate has registered).

There shall be no practical, clinical or *viva voce* examination.

Part II

The course for Part II is of the duration of two years.

Every candidate presenting himself for Part II of the M.D. Examination in any of the Branches must have passed the Examination for Part I, and has to submit to the Registrar, together with his application for admission to the examination, the following certificates :—

- (i) A certificate of his having completed, under the guidance and to the satisfaction of a recognized teacher or teachers, the courses of study in the subjects of the Branch in which he presents himself for the examination in accordance with any one of the alternatives provided.
- (ii) A certificate of his having acquainted himself with the subjects allied to his speciality, and approved by the teacher. Provided further that a candidate presenting himself for the examination in Branch VI must in addition to the above-mentioned certificates, submit with his application a certificate of his having spent, under the guidance and to the satisfaction of a recognized teacher or teachers, six months in the study of Surgical Tuberculosis in the course of the two years of his post-graduate study.

(a) Every candidate presenting himself for Part II of the M.D. Examination for the first time, must submit with his application for admission to the examination four typewritten copies of a dissertation, not exceeding 2,500 words prepared under the direction and guidance and to the satisfaction of his University teacher. The dissertation may relate to a series of Clinical cases, autopsy records, discussion of a topic (modern or historical) or a review of work on a specific theme. The dissertation

is referred to the examiners for Part II of the examination for the particular Branch, and acceptance of it by the examiners is a condition precedent to the admission of the candidate for the written part of the examination. It may form the basis of the *viva voce* examination, and due credit may be given for the same. Provided, however, that a candidate who has failed to pass the examination under the old rules and appears for the examination under the new rules under the provisions of Clause 4 of Transitory Regulation 356F shall not be required to submit a dissertation.

(b) A candidate whose dissertation has been accepted by the Examiners but who is declared to have failed at the examination will be permitted to appear on a subsequent occasion on submission of a fresh application and payment of a fresh fee.

A candidate who has submitted his dissertation once will not be required to submit a fresh dissertation, if he re-appears for the examination in the same Branch on a subsequent occasion, provided that the dissertation has been accepted by the Examiners. He shall, however, be required to submit a fresh dissertation if he seeks admission to the examination in another Branch.

The courses for Part II may be completed:—

- (i) by post-graduate study in an approved teaching institution or
- (ii) by holding approved appointment or
- (iii) by combination of (i) and (ii).

(a) The periods spent by a candidate in an approved appointments for Part II in teaching hospitals will count towards post-graduate study as indicated below:—

- (i) the period spent by a candidate in an approved appointment in his subjects for Part II before passing the examination for Part I will be deemed equivalent to the bare period of the appointment including the duration of the incoming period, if any, provided the candidate's work is certified as satisfactory by his Post-graduate Teacher and the Head of his Institution.
- (ii) the period spent by a candidate in an approved appointment in his subjects for Part II after passing the examination for Part I will be deemed equivalent to twice the period of the appointment and the bare duration of the incoming period, if any, provided the candidate's work is certified as satisfactory by his Post-graduate Teacher and the Head of his Institution. The maximum period of approved appointment for which credit can be given under the provisions of this clause shall not exceed six months.

(b) The period spent by a candidate in an approved appointment either in a teaching or a non-teaching hospital in subjects other than

that for Part II will be deemed equivalent to half the corresponding period of post-graduate study, provided his work is certified as satisfactory by the Head of the Department in which the post is held and by the Head of the Institution. The maximum period for which credit can be given under this clause shall not, however, exceed one year.

(c) The period spent by a candidate in an approved appointment held in a non-teaching hospital in the subject of the particular Branch for which they have registered, will be recognized for the purpose of post-graduate study and will be deemed equivalent to the bare period of the appointment. The maximum period of approved appointment for which credit can be given under the provisions of this clause shall not, however, exceed six months.

(d) The total duration of the studies, namely, two years, shall remain unaffected in any case.

The examination for Part II is as under:—

Branch I—

General Medicine and Therapeutics :

- Papers I—II—Three papers on subjects relating to General Medicine and Therapeutics
- Paper IV—An essay.

Branch II—

Pathology and Bacteriology :

- Papers I & II—Two papers relating to Pathology and Bacteriology.
- Paper III—General Medicine.

Branch III—

Obstetrics, Gynaecology and Diseases of Infancy :

- Paper I—Obstetrics and diseases of the new born.
- Paper II—Gynaecology.
- Paper III—General Medicine.
- Paper IV—An essay.

Branch IV—

Pharmacology :

- Papers I & II—Theoretical and experimental aspects of pharmacy and toxicology including Bio-assay, Chemical Pharmacology, etc.

and

Applied Pharmacology and Therapeutics, including physio-therapeutics, immuno-therapeutics, etc.

- Paper III—General Medicine.
- Paper IV—An essay.

Branch V—**Pediatrics :**

Paper I—Diseases of Children, Development, Psychology and Child Welfare.

Paper II—Diseases of Children, one section in Paper II will be devoted to Pediatric Pathology.

Paper III—General Medicine.

Paper IV—An essay.

Branch VI—**Tuberculosis :**

Paper I—Medical Aspects of Tuberculosis, Public Health Aspects of Tuberculosis.

Paper II—Surgical Aspects of Tuberculosis.

Paper III—General Medicine.

Paper IV—An essay.

N.B.—1. In all branches there shall be clinical, practical and oral examinations.

2. The essay in all the branches shall cover subjects of the speciality including the history of the branch concerned. Optional themes shall be given for essay.

3. Each paper shall be of three hours' duration.

4. The examiners appointed for the M.D. Examination in Part II shall have the power to refer any of the failed candidates for one year.

3. The paper in General Medicine for all the Branches shall be set and examined by the Specialists in the respective Branches.

(v) M.S. Examination**(New Rules)**

Every candidate for the Degree of Master of Surgery must have taken the degrees of Bachelor of Medicine and Bachelor of Surgery of this University or of any University recognized by this University, or of Licentiate of Medicine and Surgery of this University, and must have passed the examination not less than three previously.

N.B.—Registration as a post-graduate student is a condition precedent to the commencement of post-graduate studies.

The examination for the Degree of Master of Surgery comprises the following branches :—

- I. General Surgery.
- II. Orthopaedics.
- III. Oto-rhino-laryngology.
- IV. Ophthalmology.

The examination for the Degree of M.S. in each of the above Branches is in two parts, viz., Part I and Part II.

No candidate is admitted to the Examination for Part II unless he has passed the Examination for Part I, but a candidate may enter upon the course for Part II before passing the Examination for Part I.

Part I

No candidate will be admitted to this examination unless he has completed one year after registering himself as a student for the M.S. degree.

The Examination for Part I in the different Branches consist of three papers, as under, each of two hours' duration.

For Branches I and II

Paper I—Anatomy and Embryology, (in relation to the particular Branch for which the candidate has registered).

Paper II—Physiology and Applied Pharmacology, (in relation to the particular Branch for which the candidate has registered).

Part III—Pathology and Bacteriology, (in relation to the particular Branch for which the candidate has registered).

For Branches III and IV

Paper I—Applied Anatomy and Applied Physiology, (in relation to the particular Branch for which the candidate has registered).

Paper II—Applied Pharmacology, (in relation to the particular Branch for which the candidate has registered).

Paper III—Pathology and Bacteriology, (in relation to the particular Branch for which the candidate has registered).

There shall be no practical, clinical or *viva voce* examination.

Part II

The details regarding the requirements to be satisfied by candidates for Part II of the M.S. Examination and the method by which the course for Part II may be completed apply *mutatis mutandis* to Part II of the M.D. Examination

The Examination for M.S., Part II is as under:—

Branch I—

General Surgery:

Papers I—III—Papers on subjects relating to General Surgery.

Paper IV—An essay.

Branch II—

Orthopaedics:

Papers I and II—Papers on subjects relating to the Speciality.

Paper III—General Surgery.

Paper IV—An essay.

Branch III—

Oto-rhino-laryngology :

Papers I and II—Papers on subjects relating to the Speciality.

Paper III—General Surgery.

Paper IV—An essay.

Branch IV—

Ophthalmology :

Papers I and II—Ophthalmic Medicine and Surgery and Optics.

Paper III—The relation of Ophthalmology to General Medicine Surgery.

Paper IV—An essay.

N.B.—1. In all branches there shall be clinical, practical and oral examination.

2. The essay in all branches will cover subjects of the speciality including history of the branch concerned. Optional themes shall be given for the essay.

3. Each paper shall be of three hours' duration.

4. The examiners appointed for the M.S. Examination in Part II shall have the power to refer any of the failed candidates for one year.

5. Paper III in Branches II, III and IV shall be set and examined by specialists in respective branches.

(vi) *Degree of Bachelor of Science (Medical) B.Sc. (Med.)*

The Examination for the B.Sc. (Med.) is open to those who have passed the M.B., B.S. Degree of this University or of any other University recognized by this University and have registered for the M.Sc. (Med.) Degree. Candidates for the examination must select a subsidiary and a principal subject out of the following—

(i) Human Anatomy.

(ii) Human Physiology.

(iii) Pharmacology.

(iv) Pathology, Bacteriology and Parasitology.

Candidates are not be required to keep terms in addition to the terms kept by them during their medical studies for the above subjects.

The scheme of the examination for the subsidiary as well as the principal subjects is as under:—

A. Two papers of 100 marks each and of three hours' duration each.

B. Two practicals of not less than three hours' duration each and a *viva voce*.

Total marks for the practical and oral are 200.

To pass the examination, a candidate must obtain 50 per cent of the marks in the written and 50 per cent in the practical and oral examinations combined.

For the First Class a candidate must obtain 60 per cent or more marks in the total.

(vii) *Degree of Master of Science (Medical) M.Sc. (Med.)*

The M.Sc. (Med.) Examination is open to those who have taken the M.B., B.S. Degree of this University or of any other University recognized as equivalent thereto and have taken (a) the B.Sc. (Med.) Examination of this University or (b) the B.Sc. Degree of this University in any of the following subjects, *viz.*, Anatomy, Physiology or Microbiology or (c) the B.Pharm. Degree of this University. Candidates have to undergo a post-graduate course in the subjects selected for two academic years the satisfaction of a recognized University teacher.

The examination comprises the following branches :

- I. Human Anatomy.
- II. Human Physiology.
- III. Pharmacology.
- IV. Pathology, Bacteriology and Parasitology.

The details of the examination are as under :

(a) Three papers pertaining to the speciality. The papers are of 100 marks each and of three hours' duration each.

The papers in different branches are as under :

Branch I—

Human Anatomy :

- Paper I—Anatomy.
- Paper II—Anatomy including comparative Anatomy.
- Paper III—Embryology and history of Anatomy.

Branch II—

Human Physiology :

- Paper I—General Physiology.
- Paper II—Biochemistry and Metabolism.
- Paper III—Mammalian Physiology, comparative Physiology and history of Physiology.

Branch III—

- Papers I and II—Theoretical and experimental aspects of Pharmacology and history of Pharmacology.
- Paper III—Applied Pharmacology.

Branch IV—

Pathology, Bacteriology and Parasitology.

Note.—Candidates may select any of the combinations of papers detailed below :

(i) *Papers I to III in Pathology exclusively.*

(ii) *Paper I—Pathology—General.*

Papers II and III—Bacteriology including history of Bacteriology.

(iii) *Paper I—Pathology—General.*

Papers II and III—Animal Parasitology.

(b) Practicals which may extend up to three days—there being two practicals of three hours' duration, each day.

(c) A *viva voce* examination.

Total marks for the practical and the oral are 300.

A discussion on the dissertation forms a part of the *viva*.

To pass the examination a candidate must obtain 50 per cent in the written and 50 per cent in the practical and oral combined.

A candidate must obtain 66 per cent or more in the total for a First Class and 75 per cent or more in any paper or papers where there are separate papers in special subjects for a distinction.

(viii) *Diploma in Public Health*

Candidates who have passed not less than a year previously the M.B., B.S. Examination of this or any other recognized University, or who have taken the Degree of L.M. & S. of this University only, are admitted to this examination.

The examination is divided into two Parts, Part I and Part II. A candidate must pass in all subjects of Part I before being admitted to the examination for Part II. A candidate may appear in Part I (but not Part II) of the examination on completion of a year after graduation, provided that after passing any of the qualifying examinations mentioned above he has attended during a period of one academic year courses in—

(1) Bacteriology and Parasitology (including Medical Entomology and Protozoology, Helminthology and Immunology) especially in their relation to diseases of man and to those diseases of the lower animals transmissible to man. (Duration of the course: at least 140 hours).

(2) Chemistry, Physics, Radiology, Electrolgy, Meteorology and Climatology in relation to Public Health. (Duration of the course: at least 140 hours).

A candidate can appear in Part II after producing the certificate to the effect that

(i) he has passed Part I of the examination;

(ii) he has, during one academic year, been engaged in acquiring practical knowledge of the duties, routine and special, of Public Health Administration under the supervision of a Medical Officer of Health and has received from this Officer

or other responsible Officer, during periods of not less than three hours each on sixty working days, practical instruction in the following subjects in a recognized institution; (a) Maternity and Child Welfare Service; (b) Health Service for Children of School age; (c) Venereal Diseases service; (d) Tuberculosis service; (e) Industrial Hygiene; (f) Inspection and Control of Food, including meat and milk. (Instruction in (a) to (f) should include attendance at the Centres, Clinic Institutions and premises concerned).

Certificates of having received the prescribed instruction in Public Health Administration must be given by the Health Officers of Bombay, Calcutta or Madras. The Laboratory instruction and practical knowledge of Public Health Administration given in any part of the United Kingdom and approved by the General Medical Council will be accepted.

- (iii) he has received during not less than 80 hours from a Teacher approved by the University, instruction in the following subjects: The Principles of Public Health and Sanitation—30 hours, Epidemiology and Vital Statistics—20 hours, Sanitary Law and Administration—20 hours, Sanitary Construction and Planning—10 hours (the numbers indicate the approximate proportion of hours to be devoted to each subject).

Part I

Part I consists of two papers and a practical examination in the Laboratory work and *viva voce* examination, the contents of the papers being distributed as under:

Paper I—Physics, Radiology, Electrolgy, Meteorology, Climatology and Chemistry.

Paper II—Bacteriology, Parasitology, Protozoology, Helminthology and Immunology.

Part II

Part II consists of two papers as under, a practical examination, report on subjects connected with outdoor sanitary work and *viva voce* examination:

Paper I—Epidemiology and Endemiology and Vital Statistics.

Paper II—Practical Sanitation and Sanitary Law.

To pass the examination a candidate must obtain 50 per cent of the total marks in each paper and 50 per cent of the total marks in each practical.

(ix) *Degree of Doctor of Hygiene*

The examination for this degree is open to candidates who have passed at least one year previously the examination for the Degree of

Bachelor of Hygiene or the D.P.H. Examination of this University or an equivalent examination of any other recognized University. Further each candidate must have attended outdoor and indoor work of a Medical Officer of Health for one year under the supervision of an approved Health Officer.

The examination is conducted as follows: (i) Public Health—three papers and a practical and an oral examination; (ii) Sanitary Laws of England and India—one paper and an oral examination. The scope of this examination is fuller than that of the Degree of Bachelor of Hygiene, and candidate must show competent knowledge of Sanitary Science in all its branches.

(x) *Diploma Course in Psychological Medicine*

The examination for this diploma is open to those who have passed the M.B., B.S. Examination of this or any other recognized University. Candidates are permitted to appear for the examination 18 months after passing the M.B., B.S., and after attendance at systematic courses of lectures and lecture demonstrations at mental hospitals, Psychopathic hospital and Child Guidance Clinic.

The examination consists of two parts as under:—

Part I

(a) *Psychology*—

One paper of three hours' duration and carrying 100 marks.
One oral, carrying 50 marks.

(b) *Anatomy and Physiology of the Central Nervous System*—

One paper in Anatomy and Physiology, of two hours' duration and carrying 50 marks.

One practical and oral in Anatomy and Physiology, carrying 50 marks.

Part II

(a) *Psychiatry*—

Two papers, each of three hours' duration and carrying 100 marks each.

One essay or commentary on a case, of 50 marks. Clinical Examination, carrying 100 marks.

Oral Examination, carrying 50 marks.

(b) *Neurology*—

One paper, of three hours' duration, carrying 100 marks.

Clinical and Oral Examinations, carrying 50 marks.

(xi) *Diploma in Medical Radiology and Electrolgy*

The examination for this diploma is open to those who have passed the M.B., B.S. Examination of this or any other recognized University.

The courses for this diploma extend over one academic year and the examination consists of two parts as under:—

Part I—Physics and Electro-technics (one paper), one Practical inclusive of the Oral Examination.

Part II—Radiology, Electrology and Pathology (one paper), one Practical and Clinical Examination inclusive of the Oral.

(xii) *Diploma in Anaesthesia*

The examination for this diploma is open to those who have passed M.B., B.S. Examination of this University or any other recognized University or the L.M. & S. Examination of this University and who have

- (a) held an appointment as a Resident Anaesthetist or any other approved appointment at a hospital recognized by the University for the purpose for a period of at least 12 months; or
- (b) of having personally administered anaesthetics in a recognized hospital on 1,000 recorded occasions, at least 300 of which shall have been for major surgical procedures, or
- (c) of having satisfactorily completed a course of special instruction in the syllabus prescribed for this diploma.

The examination is partly written and partly practical. The written examination consists of two papers as under:—

Paper I—Anatomy, Physiology and Pharmacology.

Paper II—Theory and Practice of Anaesthesia.

The practical examination consists of two orals and two practicals as under:—

1. Demonstration of the use of the various types of apparatus employed in the production of anaesthesia and their maintenance.
2. Practice of Anacothesia.

(xiii) *Diploma in Venereology and Dermatology*

The examination for this diploma is open to those who have taken at least 12 months previously the degrees of M.B., B.S. of this University or any other recognized University or the L.M. & S. Degree of this University and have

- (a) held an approved appointment of at least three months in the Skin Diseases Department and three months in the Venereal Diseases Department of a recognised hospital or a recognised institution, or
- (b) attended, subsequently to having passed the examination for the Degree of L.M. & S., or the M.B., B.S. Degrees the 'post-graduate course for a period of 12 months at an institution recognized for the purpose and
- (c) satisfactorily completed during this period a

course of special instruction in Anatomy, Embryology, Physiology, Pathology and Bacteriology of the skin and genito-urinary tract including work in the laboratory.

The examination is partly written and partly practical. The written examination will be in the following subjects:—

Paper I—Section A—Anatomy, Physiology, Pathology and Bacteriology of Skin and Genito-urinary Tract. Section B—Preventive aspects relating to Skin and Venereal Diseases.

Paper II—Venereal Diseases.

Paper III—Skin Diseases.

The practical examination consists of clinical, practical and oral tests.

(xiv) *Diploma in Forensic Medicine*

The examination for this diploma is open to those who have taken not less than two years previously the M.B., B.S. Degree of this University or of any University recognized by this University and

- (1) have held for a period of six months a resident appointment as a house physician or house-surgeon, as a 'casualty officer of a hospital having at least 100 beds.

or

- (2) have undergone practical training

- (i) for a period of three months in Laboratory of the Chemical Analyser,

- (ii) in clinical practice of forensic medicine for a period of three months under the Police-Surgeon,

- (iii) in the performance of medico legal autopsies in recognised institutions for a period of three months,

- (iv) hospital practice in a mental hospital for a period of three months,

- (v) in the pathological laboratory for a period of three months.

(Any two of the courses mentioned above could be taken concurrently)

and produce a certificate of having studied comparative anatomy from the forensic aspect particularly bones for a period of three months and having attended a course of lectures for a period of three months.

It shall be competent to the Syndicate to grant, on the merits of each case, exemption from any of the above requirements.

The examination is partly written and partly practical. There shall be three papers, in written examination as under:—

	..	3 hours' duration
I. Forensic medicine including jurisprudence	..	100 marks
II. Forensic chemistry and toxicology	..	100 marks
III. Criminal psychology and psychiatry	..	100 marks

The practical will consist of—

(a) Clinical examination	.. ..	100 marks
(b) Laboratory examination in forensic chemistry	.. ..	50 marks
(c) Laboratory examination in Pathological aspect of forensic medicine	.. ..	50 marks
(d) <i>Viva voce</i> examination	.. ..	100 marks

For passing the examination a candidate shall obtain 50 per cent of the total marks in each paper and 50 per cent of the total marks in each practical.

FEEES FOR ADMISSION TO EXAMINATIONS

	Rs.
1. Intermediate Examination in Arts	30
2. B.A. (General & Special) Examination	50
3. M.A. Examination	75
4. T.D. Examination (Part I)	15
5. T.D. Examination (Part II)	10
6. T.D. Examination (Both Parts)	25
7. B.T. Examination (either Part)	15
8. M.Ed. Examination	75
9. Diploma in Librarianship	15
10. Intermediate Examination in Science	40
11. B.Sc. Examination (Principal Subjects)	50
12. B.Sc. Examination (Subsidiary Subjects)	35
13. B.Sc. Examination (Principal and Subsidiary both taken together)	70
14. M.Sc. Examination	100
14A. M.Sc. (Agri.) Examination	100
15. F.Sc. (Vet.) Examination	40
16. S.Sc. (Vet.) Examination	40
17. Third Year B.Sc. (Vet.) Examination	50
18. B.Sc. (Vet.) Examination	50
19. First Examination in Engineering	40
20. Second Examination in Engineering (Civil, Mechanical & Electrical)	40
21. B.E. (Part I) Examination	30
22. B.E. (Part II) Examination	90
23. M.E. Examination	100
24. First Year B.Sc. (Tech.) (New) Examination	50
25. B.Sc. (Tech.) Examination	100
26. M.Sc. (Tech.) Examination	100
27. Intermediate Textile Examination	30
28. Third B.Text. Examination	30
29. B.Text. Examination	50

			Rs.
30.	First Year B.Chem. Eng.	.. ..	40
31.	Second Year B.Chem. Eng.	.. ..	40
32.	Third Year B.Chem. Eng.	.. ..	60
33.	Final B.Chem. Eng.	.. ..	100
34.	Intermediate Architecture Examination	.. ..	30
35.	Law Preliminary	.. ..	35
36.	First LL.B.	.. ..	40
37.	Second LL.B. Examination (Old)	.. ..	50
38.	Second LL.B. Examination (New)	.. ..	50
39.	LL.M. Examination	.. ..	150
40.	First M.B., B.S. Examination	.. ..	40
41.	Second M.B., B.S. Examination (Old)	.. ..	20
42.	Second M.B., B.S. Examination (New)	.. ..	50
43.	Third M.B., B.S. Examination (Old)	.. ..	75
44.	M.D. (Part I)	.. ..	50
45.	M.D. (Part II)	.. ..	150
46.	M.S. (Part I)	.. ..	50
47.	M.S. (Part II)	.. ..	150
48.	B.Sc. (Medical)	.. ..	50
49.	M.Sc. (Medical)	.. ..	100
50.	B.D.S. Examination (First) (Old) (Rs. 30 each group).		50
51.	B.D.S. Examination (Final) (Old) (Rs. 40 each group).		75
52.	First B.D.S. Examination (New)	.. ..	30
53.	Second B.D.S. Examination (New)	.. ..	40
54.	Third B.D.S. Examination (New)	.. ..	30
55.	Final B.D.S. Examination (New)	.. ..	35
56.	D.P.H. Examination	(For each part).	100
57.	D. Hy.	.. ..	200
58.	D.M.R.E. Examination	.. ..	75
59.	D.P.M. (Part I)	.. ..	50
60.	D.P.M. (Part II)	.. ..	100
61.	D.A.	.. ..	150
62.	D.V.D.	.. ..	150
63.	Intermediate Examination in Commerce	.. ..	30
64.	B.Com. Examination	.. ..	50
65.	M.Com. Examination	.. ..	100
66.	Ph.D. Translation Test	.. ..	25
67.	Ph.D. Examination	.. ..	100
68.	D.Litt. Examination	.. ..	200
69.	D.Sc. Examination	.. ..	200

CALCUTTA UNIVERSITY

INTRODUCTORY

In July 1854, the Court of Directors sent out a Despatch to the Governor-General of India in Council, directing the organization of the Universities of Calcutta, Madras and Bombay. In pursuance of that Despatch, the University of Calcutta was founded on 24th January, 1857. As regards its constitution, the University adopted, in the first instance, the form, government and regulations of the University of London, and gradually as necessity arose, changed and adapted them to the requirements of its own students.

The University of Calcutta was incorporated by an Act of the Legislative Council (Act No. II of 1857) for the purpose of ascertaining by means of examination the persons who had acquired proficiency in the different branches of Literature, Science and Art, and of rewarding them by academical degrees.

A supplementary Act was passed in 1860 (Act No. XLVII of 1860) giving the power of conferring Degrees other than those provided for in the former Act.

An additional Act was passed in 1884 (to amend Act No. XXI of 1875, which authorized the University of Calcutta to grant University Degrees) giving the University the power of conferring the Honorary Degrees of Doctor in the Faculty of Law upon any person, on the ground of his eminent position and attainments, without requiring him to undergo any examination. The first honorary Degree of D.L. granted by the University was conferred upon the late King-Emperor Edward VII (then H.R.H. the Prince of Wales) at a Convocation held on 3rd January, 1875.

In January, 1902, His Excellency the Governor-General of India-in-Council appointed a Commission "to inquire into the condition and prospects of the Universities established in British India; to consider and report upon any proposals which have been, or may be, made for improving their constitution and working and to recommend to the Governor-General-in-Council, such measures as may tend to elevate the standard of University teaching, and to promote the advancement of Learning." The Commission submitted their Report on the 9th of June, 1902. An Act amending the Law relating to the Universities in British India (Act VIII of 1904), passed by the Governor-General of India-in-Council, received the assent of the Governor-General on the 24th of March 1904, and it came into force on the 1st of September 1904. Act VIII of 1904 was amended by Act II of 1905, Act XI of 1911 and Act VII of 1921. Under Act II of 1857, the University was only an examining body. Under Section 3 of Act VIII of 1904, the University has been empowered

to make "provision for the instruction of students, to appoint University Professors, Readers and Lecturers, to hold and manage educational endowments, to erect, equip and maintain University Libraries, Laboratories and Museums, to make regulations relating to the residence and conduct of students, and to do all acts consistent with the Act of Incorporation to this Act, which tend to the promotion of study and research."

The Calcutta University Act, 1951 (West Bengal Act XVIII of 1951) which came into operation from 12th March, 1954, has brought about various important changes in the constitution and character of the University. The constitutions of the Senate and the Syndicate have been changed and the Act has brought into being the Academic Council which primarily acts as the academic authority of the University. The Act has also provided for the appointment of a whole-time salaried Vice-Chancellor and a Treasurer. In certain cases the State Government is empowered to institute an enquiry into its income and expenditure, assets and liabilities or cause an inspection of the University, its buildings, its laboratories, museums, and of all its activities other than academic. The Act has also made certain rules for the appointment of Professors, Readers and Teachers.

OFFICERS AND STAFF OF THE UNIVERSITY

Chancellor

Dr. Harendra Coomar Mookerjee, M.A., Ph.D., D.Litt.

Vice-Chancellor

Sri Nirmal Kumar Siddhanta, M.A. (Cantab).

Treasurer

Sri Satishchandra Ghosh, M.A.

Registrar

Dr. Duhkhaharan Chakrabarti, D.Sc. F.N.I.

Deans

Agriculture	..	Prof. Pabitrakumar Sen, M.Sc., Ph.D., D.Sc.
Arts	..	Prof. Jitendraprasad Niyogi, M.A. Ph.D. (Lond.).
Commerce	..	Prof. Saroj Kumar Basu, M.A., Ph.D.
Education	..	Prof. Sivaprasad Chatterjee, M.Sc., T.D., Ph.D., Educ. (Lond.), D.Litt. (Paris), F.G.S.
Engineering	..	Mr. R. G. P. S. Fairbairn, B.Sc. (Glas.), Dip. R T.C. (Glas), M I.Mech.E., M I.E., M.I.Prod.E.
Fine Arts & Music	..	Prof. Suniti Kumar Chatterjee, M.A., D.Litt. (Lond.).
Law	..	Justice Sri Ramaprasad Mookerjee, M.A., LL.B.

Medicine	..	Dr. Subodh Mitra, M.B. (Cal.), M.D. (Berlin), F.R.C.S. (Edin.), F.R.C.O.G. (Lond.), F.A.C.S., F.N.I.
Science	..	Prof. Satyendranath Basu, M.Sc.
Technology	..	Prof. Bires Chandra Guha, M.Sc., Ph.D., D.Sc. (Lond.), F.N.I.
Veterinary Science	..	Captain P. B. Mookerjee, B.Sc., M.B. (Cal.), F.R.C.S. (Edin.), D.M.R.E. (Camb.), F.F.R. (Lond.), F.I.C.S., F.S.M.F.

UNIVERSITY PROFESSORS

Sanskrit

Dr. Asutosh Bhattacharyya Sastri, M.A., Ph.D., Asutosh Professor.

Islamic Studies

Dr. Muhammad Zubair Siddiqi, M.A., LL.B., Ph.D. (Cantab.), Asutosh Professor.

Mediaeval and Modern Indian History

Dr. Narendra Krishna Sinha, M.A., Ph.D., Asutosh Professor.

Ancient Indian History and Culture

Dr. Jitendranath Bannerjee, M.A., Ph.D., Carmichael Professor.

Dr. Niharranjan Ray, M.A. (Cal.), D.Phil. (Leyden), Dip. Lib. (Lond.),
F.L.A., Bageswari Professor.

Islamic History and Culture

Professor—Vacant.

Philosophy

Dr. Satischandra Chatterjee, M.A., Ph.D., Acharyya B.N. Seal Professor.

Dr. Sarvapalli Radhakrishnan, M.A., D.Litt., *Emeritus* Professor.

English

Miss A. G. Stock, B.A. (Oxon.), Dip. in Education (Oxon.), Sir Gooroodas
Banerjee Professor.

Economics

Dr. Jitendraprasad Niyogi, M.A., Ph.D., Professor.

Indian Languages

Dr. Sasibhushan Dasgupta, M.A., Ph.D., Ramtanu Lahiri Professor.

Sri Khagendranath Mitra, M.A., *Emeritus* Professor.

Pali

Dr. Nalinaksha Dutt, M.A., Ph.D., D.Litt. (Lond.), Professor.

Comparative Philology

Dr. Sukumar Sen, M.A., Ph.D.

Dr. Sunitikumar Chatterji, M.A., D.Litt. (Lond.), *Emeritus* Professor.

Mathematics

Dr. Rabindranath Sen, M.A., Ph.D., F.N.I., Hardinge Professor.

Applied Mathematics

Dr. Nikhilranjan Sen, M.A., D.Sc., Ph.D., F.N.I., Ghose Professor.

Physics

Dr. Basantidulal Nagchaudhury, M.Sc., Ph.D., Palit Professor.

Sri Satyendranath Bose, M.Sc., Khaira Professor.

Applied Physics

Dr. Purnachandra Mahanti, D.Sc., F.Inst.P., Ghose Professor.

Radio Physics and Electronics

Dr. Sisir Kumar Mitra, D.Sc., F.N.I., Emeritus Professor.

Chemistry

Dr. Pulin Bihari Sarkar, Dr.Es.Sc., A.I.C., Ghose Professor (Actg.).

Dr. Jogendrachandra Bardhan, D.Sc. (Cal. and Lond.), Khaira Professor.

Dr. Bhupendra Nath Ghosh, D.Sc., Palit Professor.

Applied Chemistry

Dr. Bireschandra Guha, M.A., Ph.D., D.Sc. (Lond.), Ghose Professor.

Botany

(Vacant)—Ghose Professor.

Agriculture

Dr. Pabitrakumar Sen, M.Sc., Ph.D. (Lond.), D.I.C., Khaira Professor.

Physiology

Dr. Bijalibihari Sarkar, D.Sc., F.R.S.E., Professor.

Zoology

Dr. Jnanendralal Bhaduri, D.Sc., Sir Nilratan Sircar Professor.

Psychology

Dr. Suhritchandra Mitra, M.A., D.Phil. (Leipzig), Professor.

Anthropology

Sri Kshitiprasad Chattopadhyaya, M.Sc. (Cantab.), Professor.

Agricultural Chemistry

Vacant. Sir Prafullachandra Ray Professor.

Political Science

Sri Debendranath Banerjee, M.A., Surendranath Banerjee Professor.

Industrial Finance

Dr. Sarojkumar Basu, M.A., Ph.D.

Geography

Dr. Sivaprasad Chatterjee, M.Sc., T.D. (Lond.), Ph.D. (Lond.), D.Litt. (Paris), F.G.S., Professor.

Geology

Sri Nirmalnath Chatterjee, M.Sc., Professor.

AFFILIATED COLLEGES

(1954-55)

<i>College</i>	<i>Principal</i>
The Presidency College, Calcutta..	Dr. J. C. Sengupta, M.Sc., D.Phil. (Heidelberg).
Hooghly Mohsin College ..	Dr. Sanat Kumar Basu, M.A., Ph.D.
Krishnagar College ..	Sri Durgaprasanna Acharyya.
Krishnash College, Berhampur ..	Sri N. K. Sarkar, M.A.
Scottish Church College, Calcutta..	Dr. H. J. Taylor, M.Sc., Ph.D.
Sanskrit College, Calcutta ..	Dr. Probodhchandra Lahiri, M.A., Ph.D.
St. Xavier's College ..	Rev. T. Picachy, S.J.
Vidyasagar College ..	Sri A. K. Dutt, M.A., LL.B.
Midnapur College ..	Lt.-Col. A. C. Chakrabarti, M.Sc., M.A. (Cantab.).
City College ..	Sri A. K. Sen, M.A.
Burdwan Raj College ..	Sri P. C. Sanyal, M.A.
Surendranath College, Calcutta ..	Sri Prafullakumar Guha, M.A., LL.B.
Raja Peary Mohan College, Uttarpara.	Sri K. C. Gupta, M.Sc., LL.B.
Bangabasi College, Calcutta ..	Sri P. K. Bose, M.A. (Cal.), B.A. (Oxon.), LL.B.
Bethune College, Calcutta ..	Mrs. Mrinalini Emerson, M.A.
Victoria College, Cooch Behar ..	Dr. S. Ganguli, M.A., Ph.D. (Lond.).
Krishnachandra College, Hetampur, Birbhum.	Sri Bhupendrachandra Sengupta, M.A., LL.B.
St. Paul's Cathedral Mission College, Calcutta	Sri H. K. Bannerji, B.Litt. (Oxon.).
Bankura Christian College ..	Sri Anilkumar Mundle, M.A.
Serampore College ..	Rev. C. E. Abraham, M.A., D.D.
Loreto House ..	Mother M. J. Consiglio Frayne, B.A., H.Dip.Ed. (Dublin).
Asutosh College ..	Sri Someswarprasad Mukherjee, M.A., LL.B.
Narasinha Dutt College, Howrah ..	Sri Jnanendranath Sen, M.Sc.
St. Joseph's College, Calcutta ..	Rev. Brother T. A. Comber.
Central Calcutta College, Calcutta.	J. C. Friend-Pereira, Esq., M.A., (Cantab.).

<i>College</i>	<i>Principal</i>
Prabhat Kumar College, Contai (Midnapur).	Sri Nepalchandra Roy, M.Sc.
St. Joseph's College, Darjeeling ..	Rev. M. Standford, S.J.
La Martiniere College, Calcutta ..	H. G. Chalke, Esq., B.A. (Lond.).
Chandranagore College ..	Sri P. B. Mitra, M.Sc., LL.B.
Victoria Institution for Girls, Calcutta.	Mrs. Suprabha Chaudhuri, M.A.
Scottish Universities' Mission College, Kalimpong.	Rev. W. M. Scott, M.A., B.D.
Salesian College, Sonada ..	O. Paviotti, S.D.B.
St. Paul's College, Darjeeling ..	L. J. Goddard, Esq., M.A. (Cantab.).
Gokhale Memorial Girls' College, Calcutta.	Miss S. E. Rani Ghosh, M.A., B.T., T.D. (Lond.).
South Calcutta Girls' College ..	Mrs. Bani Mitra, M.A.
Lady Brabourne College, Calcutta..	Dr. Mrs. Roma Chaudhri, M.A., D.Phil. (Oxon.).
Women's College, Calcutta ..	Dr. D. L. De, M.A., Ph.D. (Lond.).
Ramakrishna Mission Vidyamandir, Belur.	Swami Tejasananda.
Maharaja Manindrachandra College, Calcutta.	Dr. A. C. Banerjee, M.A., Ph.D.
Anandachandra College, Jalpaiguri.	Sri J. B. Majumdar, M.A.
Kalna College, Burdwan ..	Sri K. C. Chakravarti.
Asansol College, Burdwan ..	Sri B. B. Bhattacharyya, M.A.
Malda College, Malda ..	Sri D. K. Bhattacharyya, M.A.
Ramananda College, Bishnupur, Bankura.	Sri Ramapati Bhattacharyya, M.A.
Seth Anandaram Jaipuria College, Calcutta.	Sri S. C. Pal, M.A., B.T.
Muralidhar Girls' College, Ballygunje, Calcutta.	Sri Nalinimohan Mukherjee Sastri, M.A.
Ramsaday College, Amta, Howrah.	Sri N. Das Basu, M.Sc.
Mahisadal Raj College, Midnapur..	Sri S. Kahali, M.A.
Berhampore Girls' College, Murshidabad.	Miss Priti Gupta, M.A., B.T.
Gobardanga Hindu College, 24-Pergs.	Sri A. C. Banerjee, M.A.
Bashirhat College, 24-Pergs. ..	Sri S. K. Pal, M.A., LL.B.
Naihati Rishi Bankimchandra College, 24-Pergs.	Dr. S. R. Dasgupta, M.A., Ph.D.

<i>College</i>	<i>Principal</i>
Bangaon Dinabandhu Mahavidyalaya, 24-Pergs.	Sri A. K. Basu, M.Sc.
Women's Christian College, Calcutta.	Miss Stella Bose, M.A., B.T.
Girls' College, Howrah ..	Sri B. K. Bhattacharyya, M.A.
Maharaja Birbikram College, Agartala.	Sri S. K. Choudhuri.
Goenka College of Commerce and Business Administration.	Sri P. C. Ghosh, M.A.
Sibpur Dinabandhu Institution, Howrah.	Sri B. K. Bhattacharya, M.A.
Netaji Mahavidyalaya, Arambagh, Hooghly.	Sri G. D. Sen, M.A.
Katwa College, Burdwan ..	Sri H. M. Mukherjee, M.A.
Syamsundar College, Burdwan ..	Sri P. D. Banerji, M.A. (Cal.) M.Ed. (Leeds), Dip. in Edn. (Luds.)
Bankura Sammilani College ..	Sri A. K. Ray, M.Sc.
Darjeeling Govt. College ..	Sri A. K. Ghosal, M.A., Ph.D. (Lond.).
Tamralipta Mahavidyalaya, Tamluk.	Sri D. Chaudhuri, M.A., LL.B.
Uluberia College, Howrah ..	Sri Haripada Ghosal, M.A.
Balurghat College, West Dinajpur.	Sri Surendrakumar Majumdar, M.Sc.
Garbeta College, Midnapur ..	Sri B. B. Banerjee, M.A., LL.B.
Raiganj College, West Dinajpur ..	Sri K. K. Saraswati, M.Sc., LL.B.
Santipur College, Nadia ..	Sri T. C. Chakrabarti, M.A., Ph.D.
Sripat Singh College, Jiaganj ..	Sri A. K. Chaudhuri, M.A.
Charuchandra College, Calcutta ..	Dr. Satyendranath Ray, M.A., Ph.D. (Lond.).
Fakirchand College, Diamond Harbour.	Sri S. K. Das, M.A.
Vidyasagar College, Nabadwip ..	Sri A. N. Mukherjee, M.A.
Vidyasagar College, Suri, Birbhum.	Sri Arunkumar Sen, M.A.
Vijaygarh College, 24-Pergs. ..	Sri Amiyabhusan Chakrabarti, M.A.
Jhargram Agricultural College ..	Sri D. K. De, M.Sc.
David Hare Training College, Calcutta.	Sri D. N. Roy.
Union Christian Training College, Berhampore.	Rev. T. D. Forbes, B.D., B.E.D.

<i>College</i>	<i>Principal</i>
University Law College, Calcutta.	Prof. Pramathanath Banerjee, M.A., LL.B., D.Litt., LL.D., Barrister-at-Law, Vidyavachaspati.
Surendranath Law College, Calcutta.	Dr. S. C. Chaudhuri, M.A., LL.D. (Cantab.), Barrister-at-Law.
Calcutta Dental College ..	Dr. K. S. Malik, M.B., B.S., L.D.S., R.C.S. (Eng.).
Medical College, Calcutta ..	Dr. M. N. Sarkar, B.A., M.B., F.R.C.O.G., F.R.C.S.E. (Edin.)
R. G. Kar Medical College, Belgachia, Calcutta.	Dr. A. K. Roy Chaudhuri, M.D.
All-India Institute of Hygiene and Public Health, Calcutta.	Dr. K. V. Krishnan, M.B., B.S., D.Sc., F.R.C.P. (Edin.).
Nilratan Sarkar Medical College, Calcutta.	Sri A. K. Dattagupta, M.B., D.T.M.
National Medical Institute, Calcutta.	Dr. M. Pan, M.B., B.S., L.R.C.P., F.R.C.S.
Bengal Engineering College, Sibpur, Howrah.	Dr. R. G. P. S. Fairbairn, B.Sc. (Glas.), Dip. R.T.C. (Glas.), M.I. Mech. E., M.I.E., M.I. Prod. E.
Kandi Raj College ..	Dr. D. L. Das, M.A., Ph.D.
Kharagpur College ..	Sri H. B. Sarkar, M.A.
Prasannadeb Balika Mahavidyalaya, Jalpaiguri.	Miss Charupama Bose, M.A.
Rampurhat College ..	Sri H. K. Roy, M.A., LL.B.
Ranaghat College ..	Sri K. K. Ghose, M.A.
Siliguri College ..	Sri B. C. Guha, M.A.
Taki Govt. College ..	Sri B. Ghosh, M.A.
Barisha College ..	Dr. Susilkumar Roy, D.Sc.
Bengal Training Institute, Calcutta.	Sri M. Banerjee, B.Sc. (Cal.), M.Sc. (Leeds).
Dum Dum Motijheel College ..	Sri N. L. Ganguly, M.A.
Manimala Girls' College, Asansol..	Sri K. C. De, M.A.
Barasat College ..	Sri D. C. Chatterjee.
Bolpur College ..	Sri S. R. Ray, M.A.
Hooghly Women's College ..	Miss Santisudha Ghosh, M.A.
Vijaynarayan Mahavidyalaya, Itachuna.	Sri G. C. Majumdar, M.A.
Jangipur College ..	Sri B. R. De, M.A.
Ramakrishna Mahavidyalaya, Kailasaler	Sri S. Dhar, M.A.

<i>College</i>	<i>Principal</i>
Barrackpore Rashtraguru Suren- dranath College.	Sri C. C. Mitra, M.A., LL.B.
Bengal Veterinary College, Calcutta.	Sri K. C. Muknerjee, M.Sc., M.R.C.V.S.
Bogoola Srikrishna College ..	Sri R. N. Basu.
Institute of Education for Women, Calcutta.	Sm. N. Das, M.A.
West Bengal State College of Agri- culture, Calcutta.	Dr. P. K. De, M.Sc., Ph.D. (Lond.).

CONSTITUTION OF THE UNIVERSITY

The University Authorities are (under the Calcutta University Act, 1951)—

1. The Senate—which consists of—
 - (a) Ex-officio members,
 - (b) Life members not exceeding five, and
 - (c) Other members—elected and nominated.

The Senate is the supreme Governing Body of the University and have power to review the action of the Syndicate and the Academic Council save where the Syndicate or the Academic Council has acted in accordance with powers conferred on them by the Act. The Senate exercises all powers of the University not otherwise specifically provided for and all powers which are necessary to give effect to the provisions of the Act.

2. The Syndicate—which consists of the following members:—
 - (i) The Vice-Chancellor
 - (ii) The Treasurer
 - (iii) The Director of Public Instruction, West Bengal
 - (iv) The President, Board of Secondary Education, West Bengal
 - (v) The Deans of the Faculties of Art, Science, Law, Medicine and Engineering

Other Members :

- (vi) One Dean of a Faculty, other than the Faculties mentioned in clause (v) appointed by rotation
- (vii) Eight persons who are not teachers elected by the Senate from among its members
- (viii) Four persons elected by the Academic Council from among its members of whom at least one shall be a Principal of a Professional College and one a Principal of an Affiliated College

(ix) One Principal of a Constituent College (not being a Professional College) elected by the Academic Council from among its members

3. The Finance Committee with the Treasurer as the Chairman.

4. The Academic Council—which is the academic authority of the University and has, subject to the provisions of the Act, the Statutes and the Ordinances the control and general regulation of teaching, research and examinations within the standard thereof and exercises such other powers and performs such other duties as may be prescribed.

5. The Faculties—which include Faculties of Arts, Science, Law, Medicine, Engineering, Technology, Education, Fine Arts and Music, Agriculture and Commerce.

6. The Board of Studies.

7. The Board of Health.

8. The Board of Residence and Discipline.

The Councils of Post-graduate Teaching.—Post-graduate teaching in Calcutta is conducted only in the name and under the control of the University. For this purpose, councils have been constituted, namely, the Council of University Colleges of Arts and Commerce, the Council of Post-Graduate Teaching in Science, and the Council of Post-Graduate Teaching in Technology.

Total number of students in the University and Affiliated Colleges (as on 31st March 1954) :—

Affiliated Colleges

Arts	..	..	31,626 (including	7,802 women)
Science	..	..	31,312 (	„ 1,470 „)
Professional	..	..	12,615 (	„ 497 „)
Total			75,553 (	„ 9,769 „)

University

Arts	..	..	1,476 (including	534 women)
Professional	..	..	1,081 (	„ 155 „)
Research	..	..	25 (	„ 3 „)

Total			2,582 (	„ 692 „)
Science	583 (including	107 women)
Technological	247 („ 4 „)
Research	41 („ 8 „)

Total			871 („ 119 „)
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Grand Total			79,006 („ 10,580 „)
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Number of Successful Candidates in the different Examinations

The following shows the number of Successful Candidates at the different examinations during the year 1954:—

I.A.	..	..	..	12,550
I.Sc.	..	..	..	14,037
I.Sc. (Ag.)	..	..	..	119
B.A.	..	..	..	4,094
B.Sc.	..	..	..	4,064
B.Sc. (Ag.)	..	..	..	59
M.A.	..	..	..	1,338
M.Sc.	..	..	..	373
M.Sc. (Tech.)	..	..	..	166
B.Com.	..	..	..	3,279
B.T.	..	..	..	559
Teachership (Arts Appreciation)	..	..	..	11
English Teachership	..	..	..	Nil
Diploma in Domestic Science	..	..	..	43
Diploma in Social Work	..	..	..	114
Diploma in Spoken English	..	..	..	3
Diploma in Soap Technology	..	..	..	Nil
Diploma in Librarianship	..	..	..	31
Certificate in Tanning	..	..	..	4
Certificate in Languages	..	..	..	40
LL.B.	..	..	..	2,117
LL.M.	..	..	..	3
B.E.	..	..	..	868
Bachelor of Architecture	..	..	..	13
Diploma in Town and Regional Planning	..	..	..	4
M.E. (Public Health)	..	..	..	3
M.B., B.S.	..	..	..	4,124
M.D.	..	..	..	8
M.S.	..	..	..	7
M.O.	..	..	..	6
B.D.S. (Bachelor of Dental Surgery)	..	..	..	54
D.P.H.	..	..	..	104
Diploma in Maternity and Child Welfare	..	..	..	3
Diploma in Obstetrics and Gynaecology	..	..	..	40
Diploma in Ophthalmic Medicine and Surgery	..	..	..	14
Certificate in Applied Psychology	..	..	..	5
Diploma in Dietetics	..	..	..	5
Diploma in Tropical Medicine and Hygiene	..	..	..	37
Diploma in Journalism	..	..	..	21
Diploma in Languages	..	..	..	6
Diploma in Nutrition	..	..	..	6
Diploma in Tuberculous Diseases	..	..	..	20
Diploma in Industrial Health	..	..	..	9

LIBRARY, MUSEUMS, LABORATORIES, ETC.

The University Library is under the management of the Library Committee, subject to the general control of the Syndicate. It is for the use of Resident Fellows, Registered Graduates, Research Scholars, Professors, Readers, Lecturers and Students of Post-Graduate and Under-Graduate classes of this University, who are entitled to take out books from the Library. Every facility is given to students and research scholars to utilise the Library for the purpose of study and research from 7 a.m. to 9 p.m. daily, excepting Sundays when the Library remains open from 12 noon to 4 p.m. The Library remains closed on authorised holidays. Other persons may also use the Library with the permission of the Library Committee on payment of a small fee of Rs. 2-8-0 for every six months and a deposit of Rs. 10 only, but they are not allowed to take out books from the Library for home use. The Central Library of the University contains about 2,75,995 volumes, including pamphlets, periodicals, a fairly large collection of Bengali, Sanskrit and Tibetan Manuscripts, Chinese, Japanese and Spanish printed books, Rotograph copies of Persian and Arabic Manuscripts but excluding volumes belonging to other Libraries attached to the University, viz., Law College Library and Libraries of the different Departments of Science. The Departmental Science Libraries numbering thirteen are controlled directly by the Central Library while the Law College Library has its own committee.

The catalogue of the University Central Library is in cards; books are arranged according to Dewey's Decimal System of Classification. Budget grant for the financial year 1953-54 was Rs. 1,28,290; the amount provided for acquisition of books and periodicals, Rs. 70,000.

There are Laboratories attached to each department of the University College of Science and also Museums attached to the Departments of Anthropology, Commerce, and Ancient Indian History and Culture.

ASUTOSH MUSEUM OF INDIAN ART

Named after the late Sir Asutosh Mookerjee, the Asutosh Museum of Indian Art, the first University Museum in India, was opened in 1937. The museum at present has more than 8,000 rare and valuable exhibits, including a representative coin collection and a folk-art gallery, besides sculptures, paintings, terracottas, textiles, metal and ivory objects, etc., illustrating the different phases of Indian Art, specially of Eastern India and Bengal, from 2nd Century B.C. to modern times. The museum may be considered as the nucleus of a Regional Museum for Eastern India. Princely gifts, excavation and exploration by teachers and students have greatly enriched the Museum collections.

The activities of the Museum include:—

- (1) Regular series of lectures for students from schools and colleges;
- (2) Popular lectures for the general public;

- (3) Guide-lecture scheme to enable visitors to enjoy their contact with works of art under expert guidance ;
- (4) Research facilities for scholars in art and archaeology ;
- (5) Training of Art Teachers in theory, criticism and appreciation of art, through a Short Term Teachers' Training Certificate Course in Art Appreciation ;
- (6) Exploration and survey of important archaeological sites in Bengal ;
- (7) Comprehensive archaeological excavation of historic sites. Work has already been done at Bangarh, Dt. Dinajpur and at Nanoor, Dt. Birbhum ;
- (8) Holding of exhibitions on diverse aspects of ancient and modern art ;
- (9) Publication of picture post-cards, hand-books, memoirs, etc. ;
- (10) Cleaning and preservation of exhibits in a Research Laboratory.

SCHOLARSHIPS AND MEDALS

A large number of Scholarships, Medals and Prizes are awarded every year. For the encouragement of Post-Graduate study in Arts and Science, there are twelve University scholarships of Rs. 32 per month each which are awarded to the students who have done best at the B.A., B.Sc., or B.Com. Examination. Special scholarships are awarded for study outside India. The University offers scholarships varying between Rs. 75 and Rs. 150 each per mensem to carry on research.

PROVISION FOR RESEARCH

There is a large Post-Graduate Department which also helps candidates desirous of attaining Research Degrees. A large number of Fellowships and Research Scholarships are awarded by the University to encourage original research.

Under the Government of India Cultural Relations Scheme foreign scholars are given facilities for studies in any Faculty of this University, the expenses being borne by the Government of India.

There is one endowment under the terms of which a graduate of a foreign University may be invited to study "aspects of Hindu Civilisation and Culture". He is required to study for one year and the remuneration is Rs. 5,0000 per annum.

UNIVERSITY EXTENSION LECTURES

With a view to promoting a desire for original investigation and research amongst the advanced students of the University and members of the outside public interested in education, eminent scholars from India and abroad are, from time to time, invited by the University to deliver

courses of lectures on subjects in which they have specialized. These extension lectures are in addition to the lectures by the Special University Readers who are appointed under Chapter X of the Regulations with the sanction of the Government, the aim of these two kinds of lectures being almost identical. These lectures, after delivery, are printed and published by the University.

UNIVERSITY PUBLICATIONS

The University has an up-to-date Press of its own and it undertakes the publication of specialised lectures delivered by the University Professors, Lecturers and Readers, theses of successful candidates for Doctorate degrees research scholarships and prizes, and results of research work carried on by University Professors, Lecturers and Research Assistants, besides a number of periodicals, annuals and serials. A large number of standard works on Indian Culture, Language and Literature, Art and Iconography. History and Sociology (including Ancient Indian History and Culture), Philosophy and Religion, Economics, Politics, Law, Mathematics and Science have also been published. A descriptive catalogue of these publications may be obtained from the Registrar.

The total number of University publications is more than 700.

RESIDENCE AND COST OF LIVING

The following classes of lodgings are approved :—

- (a) Collegiate Hostels.
- (b) Non-Collegiate Hostels under external management.
- (c) Messes, attached or unattached.
- (d) Private Lodgings.

Licenses to Hostels are granted by the Board of Residence and Discipline. Students who do not live with their parents or other *bona fide* guardians approved by the Principals, have to reside in either of the four classes of lodgings mentioned above. The cost of living or messing and seat rent varies in different Hostels and Messes. The messing charge is about Rs. 40 to Rs. 45 per month including establishment. Seat rent varies from Rs. 7 to Rs. 12 per month including electric charges and medical attendance. Admission to the Hostels or Messes is understood to be for the full session of 10 months.

UNIVERSITY PROVIDENT FUND

Detailed rules have been framed for the "Calcutta University Provident Fund", to which the provisions of the Provident Fund Act have been extended by the Government of India. Membership which is compulsory for all new entrants is open to all whole-time teachers, officers, assistants and members of the lower subordinate staff. Each member contributes either one-twelfth or one-sixteenth of his monthly salary and the Fund is supplemented by an equal amount from the University. For employees who have joined from 1st June, 1938, the rate is 6½ per cent.

WOMEN'S EDUCATION

The following Institutions impart instruction to women students only:—

1. Bethune College, Calcutta.
2. Loreto House, Calcutta.
3. Victoria Institution, Calcutta.
4. Gokhale Memorial Girls' College, Calcutta.
5. South Calcutta Girls' College, Calcutta.
6. Lady Brabourne College, Calcutta.
7. Women's College, Calcutta.
8. Ballygunj Muralidhar Girls' College.
9. Berhampore Girls' College, Murshidabad.
10. Women's Christian College, Calcutta.
11. Girls' College, Howrah.
12. Asansol Manimala Girls' College.
13. Prasannader Balika Mahavidyalaya, Jalpaiguri.
14. Hooghly Women's College.
15. Institute of Education for Women.

The following Institutions have made special arrangements for imparting instruction to women students separately:—

1. City College, Calcutta.
2. Asutosh College, Calcutta.
3. Surendranath College, Calcutta.
4. Scottish Church College, Calcutta (for B. T. only).
5. Dum Dum Motijheel College, Calcutta.
6. Maharaja Manindra Chandra College, Calcutta.

In the Medical Colleges and other Institutions, lady students are allowed to prosecute their studies if they so desire along with men students.

BOARD OF HEALTH AND THE STUDENTS'
WELFARE SCHEME

A Board of Health has been constituted with the Vice-Chancellor, as Ex-Officio Chairman and the Medical Adviser of the University as Ex-Officio Secretary.

The duty of the Board is to plan and supervise the following activities:—

(a) Health Service—

- (i) Maintenance of an Eye-clinic for the University students;
- (ii) Provision of facilities for treatment of dental diseases of the University students; and
- (iii) Generally making arrangement for the physical examination of the University students.

(b) Nutrition—

- (i) Periodical survey of diet of the University students residing in recognised halls, hostels and messes ; and
- (ii) sanitary inspection of dining rooms, kitchens and students' canteens and submission of regular reports to the Syndicate.

(c) Health Education—

- (i) Drawing up of outlines of a programme of health education for College students ;
- (ii) Arranging for publicity and propaganda regarding health knowledge amongst the University students by means of lectures, slides, posters, pamphlets and health exhibitions ; and
- (iii) Appointment of Social Welfare Officers and Health Visitors.

(d) Military Education—

- (i) Organisation of the N.C.C. so as to enable it to include in it all students found medically fit during their undergraduate course ; and
- (ii) Introduction of courses of study in Military Science in consultation with Military authorities in such a manner as would enable students enrolled in the N.C.C. to appear at qualifying examination for services in the Army, Navy or Air Force, and take up 'Military Science' as an elective or additional subject for the intermediate and graduate course.

(e) Physical Education—

Setting up of an organisation to inspect and direct physical education activities in the colleges.

The health service of the Board can broadly be divided into two sub-heads :—

- (1) Medical Examination.
- (2) After-Care Work.

There is an office and a medical staff attached to the Committee.

I. Medical Examination.—The medical staff attached to the Committee—five medical practitioners—examine the health of all first-year students of some of the colleges in and around Calcutta every year. Each student examined is supplied with a copy of the findings immediately after his health examination. Further shortly after the completion of the examination, a report on health of the students is forwarded to the institution concerned. This report contains lists of students who are found to be defective, with the defects and recommendations for their

correction and improvement stated against their names and roll numbers. The Board publishes an annual report on the health of students. A lady medical examiner has been specially appointed to examine the health of lady students and to keep under observation those who are suffering from grave defects.

II. *After-Care Work.*—Two After-Care officers have been appointed to follow up and to keep under observation students suffering from grave defects. An eye clinic is attached to the department for the convenience of students.

A students' Infirmary, consisting of 10 beds, is maintained by arrangement with the Hospital authorities at the R. G. Kar Medical College Hospitals, Belgachia, for treatment of students free of all costs.

The Secretary re-examines all cases found to be suffering from respiratory and circulatory diseases and extreme cases of malnutrition and keeps them under observation. Arrangements are made with firms to supply students with glasses at concession rates. Needy students are provided with glasses free of cost. Arrangements are also made for treatment of dental affections at concession rates for students. Illustrated lectures on health matters are delivered in the different colleges periodically and health literature and pamphlets are widely distributed to students.

SPORTS BOARD

For improving the standard of sports and games and for better organisation of inter-collegiate activities a separate Sports Board was created in 1949. The Board is now constituted with the Vice-Cancellor and the Registrar are respectively as Ex-Officio President and General Secretary. A paid whole-time officer is appointed by the Syndicate to act as the Joint Secretary. The members are partly elected and partly nominated from among affiliated or other institutions interested in sports and games.

The Board (i) organises, controls, manages and supervises Inter-Collegiate Sports, Games, Rowing Tournaments and Activities amongst the students of the University and Colleges and Institutions affiliated thereto, (ii) undertakes, controls and conducts the Inter-University competitions, (iii) organises courses of training in Games and Sports and conducts Tests of Physical Efficiency, (iv) provides for the students of the Colleges and Institutions affiliated to the Board, Grounds and Buildings convenient, desirable or necessary for Games and Sports generally, whether indoor or outdoor, and all things commonly or conveniently used therewith and particularly controls, maintains, manages the Calcutta University Rowing Club at the Lakes and the University Grounds at the Maidan, (v) awards at its discretion Trophies, Cups, Certificates and 'Blues' or any other award on the results of the different tournaments and competitions, (vi) and generally takes necessary steps to encourage

all sporting, athletic and physical activities amongst students of the University and all Colleges and Institutions affiliated thereto.

The activities of the Board are suitably spread out throughout the year with the exception of two months. May and June, covered by the Summer Vacation.

TEACHERS' TRAINING DEPARTMENT

The Department holds classes for training students for the B.T. Degree Examination and also for M.A. or M.Sc. in Education.

The Department also organises from time to time lectures by eminent educationists, of general and public interest, on education and allied subjects, and it has undertaken research work on different aspects of education, as well as the publication of bulletins on educational matters.

APPOINTMENTS AND INFORMATION BOARD

An Appointments and Information Board was established by the Senate on the 23rd January 1937. The Board is constituted periodically, usually at the end of two years. The functions of the Board are as follows :—

- (1) To select apprentices for practical training, both technical and non-technical, in firms and industrial concerns.
- (2) To recommend to firms' names of suitable candidates for appointment when requested.
- (3) To conduct examinations on behalf of employers for recruitment.
- (4) To remain generally in touch with employers, to collect statistics, regarding possible openings and to supply information to graduates and under-graduates regarding the careers open to them.
- (5) To advise students preparing for various Service Examinations, to supply them with particulars of such examinations, and, if necessary, to organise their training.
- (6) To organise, from time to time, courses of lectures to be delivered by well-known businessmen of the city having wide practical experience, on different industrial and commercial subjects.
- (7) To advise students regarding their careers, and to secure facilities for their admission into institutions where necessary.
- (8) To study different fields of employment, to suggest new avenues and to organise courses where necessary.

The Board maintains a Register of suitable candidates (only graduates and under-graduates of the Calcutta University), with details of their qualifications and careers, seeking employment through it. For this purpose, it works in close co-operation with the institutions affiliated to

the University. In order to enable students outside Calcutta to take advantage of the facilities offered by the Board, it has set up an Advisory Committee in every College. It is always in close touch with different Chambers of Commerce and Trades Associations of Calcutta and their members, from whom valuable support is received. The Board is also consulted by some of the Government departments and quasi-Government institutions.

The Board is responsible for organising and conducting the Diploma Course in Social Work for giving training to Labour Welfare Officers employed by both Central and State Governments and Industries.

It has been decided by the Senate to amalgamate the Board with the Students Information Bureau (Overseas). Apart from the functions already performed by these departments, the joint organisation will also serve as an information centre in the University for the following purposes :—

- (a) Information regarding various courses of studies offered by the different Indian Universities and technical institutions.
- (b) Information regarding various competitive examinations and other recruitments by Government and semi-Government department.
- (c) Information and guidance to the public and the students who might have business in the Registrar's department.
- (d) Information and guidance to the public and the students who might have business in the Controller's Office.
- (e) This joint organisation shall also be responsible for conducting the Service Examination Classes.

MAIN SOURCES OF INCOME (ACTUALS OF 1953-54)

	Rs.
From Fees	33,66,970
From Endowments	1,87,819
From Fees from Post-Graduate students ..	4,49,157
From Fees from Law College	2,05,271
From West Bengal Government grant ..	21,52,000
	<hr/>
	63,61,217
	<hr/>

Proportion of Government grant .. 38.8 per cent

ADMISSION TO THE UNIVERSITY

A candidate seeking admission to the University must have passed the Matriculation Examination* of the Calcutta University or the School Final Examination conducted by the Board of Secondary Education, West Bengal, or an examination accepted as equivalent thereto. The University confers in Arts the Degrees of B.A. (Pass and Honours), M.A., D.Phil., and D.Litt.; in Science, B.Sc. (Pass and Honours), B.Sc. (Tech.), M.Sc., M.Sc. (Tech.), D.Phil., and D.Sc. The Professional Degrees are B.Com., B.T., LL.B., LL.M., LL.D., M.B., B.S., M.D., M.S., M.O., D.S. (Public Health), Bachelor of Nursing, B.D.S., B.E., M.E. (Public Health), Bachelor of Architecture, Master of Architecture, Master of Planning and D.Sc. (Engineering). In addition to the above, the following Diplomas are also granted: Diploma in Public Health, Diploma in Ophthalmic Medicine and Surgery, Diploma in Spoken English, Diploma in Gynaecology and Obstetrics, Diploma in Maternity and Child Welfare, Diploma in Librarianship, Diploma in Journalism, Diploma in Soap Technology, Diploma in Domestic Science Training, Diploma in Town and Regional Planning, Diploma in Social Work (Labour Welfare), Diploma in Languages, Diploma in Child Health, Diploma in Industrial Health and Diploma in Medical Radiology and Electrology. Diploma Courses in Tropical Medicine and Hygiene (D.T.M. & H.) and Anaesthesia (D. Anae.) have also been recently started. Provision is made, under conditions, for admission as non-collegiate students of Teachers, Laboratory Assistants, Demonstrators and Librarians of affiliated Colleges. Women candidates can appear at certain University examinations without studying in an affiliated College.

COURSES OF STUDY AND DEGREES

ARTS

Intermediate Examination.—A student must have passed the Matriculation or the School Final Examination in order to be admitted to this course of study which extends over a period of two years. The subjects and scheme of examination are as follows: English (three papers), one of the Vernacular Languages (one paper) and three of the following (two papers each) of which two at least must be from Group A:

Group A.—(1) One of the Classical Languages†, (2) History, (3) Logic, (4) Mathematics, (5) Elements of Civics and Economics, (6) Commercial Geography, (7) Commercial Arithmetic and Elements of Book-keeping and (8) Junior Military Course.

* The School Examination has taken the place of Matriculation Examination from 1952. The control so long exercised by the University over High Schools has now been vested in a Board.

† Bengali, Hindi, Assamese and Urdu may be taken up in lieu of a Classical Language under certain conditions.

Group B.—(1) Physics, (2) Chemistry, (3) Geography, (4) Physiology, (5) Botany, (6) Zoology, (7) Geology, (8) Anthropology, (9) Biology and (10) Psychology.

(Practical examination is held in the subjects in Group B).

Candidates may also be examined, if they so desire, in an additional subject, i.e., Geography or any other subject included under Group A, provided they have not already taken the subject. In this optional subject there will be two papers.

The minima for a pass are as follows:—English 30 per cent, Vernacular or in the alternative paper, 30 per cent, and 30 per cent in each of the remaining subjects; excepting that in each of the subjects in Group B, the pass marks in the two *theoretical* papers is 40 and in the *practical* papers 20, and 36 per cent of the aggregate. Those who obtain 50 per cent or more of the aggregate are placed in the First Division and those who obtain 40 per cent, in the Second Division.

Bachelor of Arts (Pass and Honours).—The course of study extends over a period of two years. A student must have passed the Intermediate Examination in Arts or Science in order to be admitted to this course.

Every candidate is examined in the following subjects:—

1. English—Three papers for Pass. Six Hons. papers.
2. Vernacular—One Pass paper.
- 3 & 4. Two of the following subjects, one of which at least must belong to Group A:—

Group A

- I. One of the following languages:—Sanskrit, Pali, Arabic, Persian, Hebrew, Classical Armenian, Greek, Latin, French, German, Italian, Syriac; or one of the following Vernaculars (Pass or Honours): Bengali, Assamese, Hindi or Urdu—three Pass papers and six Honours papers in each of these subjects.
- II. History.
 - II-A. Indo-Islamic and World History.
 - II-B. Islamic History and Culture.
 - II-C. Ancient Indian and World History.
- III. Political Economy and Political Philosophy
- IV. Mental and Moral Philosophy.
- V. Mathematics.
- VI. Linguistics.
- VII. Education.
- VIII. Senior Military Course.

(The syllabus of Mathematics in the Honours Course includes study of Astronomy). The Course in Astronomy includes practical training in the subject.)

Three Pass papers and six Honours papers in each of the subjects.

No candidate will be allowed to take up more than one subject among I, II-A, II-B and II-C.

No candidate will be allowed to take up Mental and Moral Philosophy unless he has passed the Intermediate Examination in Logic and no candidate will be allowed to take up this subject along with Psychology.

Group B

- I. Physics.
- II. Chemistry.
- III. Physiology.
- IV. Botany.
- V. Zoology.
- VI. Anthropology.
- VII. Psychology.
- VIII. Geography.
- IX. Statistics.
- X. Geology.

In the Pass course, two Theoretical papers and one Practical paper and in the Honours course, four Theoretical papers and two Practical papers in each of these subjects.

No candidate will be allowed to take up any subject in Group B or Mathematics, who has not taken up the corresponding subjects at the Intermediate Examination. If, however, a candidate has passed the Intermediate Examination taking up Psychology, Physiology, Biology or Physics, he may take up Psychology. No candidate will be allowed to take Botany if he has not passed the Intermediate Examination with Botany or Biology. No candidate shall be allowed to take up Statistics unless he has passed the Intermediate Examination in Mathematics.

The maximum number of marks for each paper is 100.

1. A candidate must obtain, in order to pass, 33 per cent marks.
2. If a candidate takes up the Pass course in four subjects, he must, in order to pass the B.A. Examination, pass in each subject, and obtain 360 marks in the aggregate. If he passes and obtains 500 marks in the aggregate, he shall be declared to have passed with distinction.
3. If a candidate takes up the Pass course in three subjects, and the Honours course in one subject, he must, in order to pass the B.A. Examination, pass in each subject, and obtain 468 marks in the aggregate. If he passes and also qualifies for Honours in his Honours subject, he shall be declared to have obtained Second Class Honours in that subject. If he passes, qualifies for Honours in his Honours subject, and obtains 360 marks in that subject, he shall be declared to have obtained First Class Honours in such subject.

Master of Arts.—The course of study extends over two years and is open to Bachelor of Arts and Commerce. The subjects of study and the scheme of examination are as follows:—

1. English	.	..	8 papers
2. Sanskrit	..	..	"
3. Pali	..	..	"
4. Arabic	..	..	"
5. Persian	..	..	"
6. Hebrew	..	..	"
7. Syriac	.	..	"
8. Greek	..	..	"
9. Latin	..	..	"
10. French	..	..	"
11. German	..	..	"
12. Modern Indian Language	..		"
13. Comparative Philology	..		"
14. Mental and Moral Philosophy	..		"
15. History	.	..	"
15a. Ancient Indian History and Culture	..	..	"
16. Islamic History and Culture	..		"
17. Economics	..	..	"
17a. Political Science	..	..	"
18. Commerce	..	..	"
19. Pure Mathematics	..	..	"
19a. Education	..	..	"
20. Applied Mathematics	..		"
21. Physics	..	.	5 Theoretical papers and 3 days Practical tests.
22. Chemistry	..	..	4 Theoretical papers and 4 Practical papers.
23. Physiology	..	.	5 Theoretical papers and 4 Practical papers.
24. Botany	..	..	"
25. Geology	..	..	5 Theoretical papers and 3 days Practical tests.
26. Zoology and Comparative Anatomy	..	..	5 Theoretical papers and 5 days Practical tests.

27 Psychology	5 Theoretical papers and Practical Examination for at least 4 days
28 Anthropology	5 Theoretical papers and 3 days Practical tests
29 Statistics	5 Theoretical papers, 3 Practical papers (for those who take up Group B or C) and and 1 Practical paper
	7 Theoretical papers (for those who tak up Group A)
30 Geography	6 Theoretical papers and 2 Practical papers

In order to obtain a pass in subject 1 20 a candidate must obtain 288 marks in the aggregate. No minimum pass marks are required in each paper but if in any paper a candidate obtains less than 25 marks those marks are not included in his aggregate. Candidates obtaining 360 marks are placed in the Second Class and those obtaining 480 marks in them in the First Class.

In order to pass in subject 22 a candidate must obtain 132 marks in the aggregate of the four papers (theoretical) and 160 marks in the practical examination. In order to pass in subjects Nos 21 25 27 and 26 a candidate must obtain 165 marks in the aggregate in the theoretical papers and 120 marks in the practical examinations. Marks less than 20 obtained in any theoretical paper in these subjects will not be included in the aggregate. In order to pass in subjects Nos 23 24 and 26 a candidate must obtain 132 marks in the aggregate in the theoretical papers and 160 marks in the practical examination and marks less than 20 obtained in any theoretical papers in these subjects will not be included in the aggregate.

In order to pass in Statistics a candidate must obtain 33 per cent of the aggregate marks prescribed for theoretical papers and 40 per cent of the marks set apart for practical examinations. If in any theoretical paper a candidate obtains less than 25 marks these marks shall not be included in his aggregate. Candidates obtaining 360 marks shall be placed in the Second Class and those obtaining 480 marks in the First Class.

In order to pass in Geography a candidate must obtain 33 per cent of the marks in theoretical papers and 40 per cent of the marks in practical examinations. Less than 25 marks obtained in the theoretical paper will not be included in the aggregate. Candidates obtaining 360 marks are placed in the Second Class and those obtaining 480 marks in the First Class.

Degree of Doctor of Philosophy in Arts and Science.—Any Master of Arts, Science or Technology may be a candidate after working for two years under a teacher recognised by the University. This is an examination by thesis supplemented by an oral and/or a practical examination.

Degree of Doctor of Literature.—A Master of Arts may be a candidate for the degree, three years after the M.A. Degree. This is an examination by thesis, supplemented in the case of those who passed the M.A. Examination in the Third Class and also in the case of those who passed M.A. Examination in the Second Class, if it is necessary by an examination written, oral, or, in subjects which admit of it, practical. On the approval of the Syndicate the Degree of Doctor of Literature is conferred. Any Doctor of Philosophy in Arts may also be a candidate for this degree.

Diploma in Spoken English.—This is open to all holders of a Bachelor's Degree and Licentiates in Teaching, who have received training in elocution for a period of not less than one year under a teacher recognised for the purpose. Candidates are required to undergo a written examination to test the candidate's knowledge of the elements of Phonetics with special reference to the pronunciation of English words and an oral examination to test the candidate's power of elocution and his ability to carry on an ordinary conversation in English. To obtain a pass, a candidate must get 30 marks in the written examination and 200 marks in the oral examination. Candidates obtaining 300 marks in the aggregate are placed in the First Class.

Diploma in Journalism—Any candidate who has passed an examination for a Bachelor's degree in any Faculty of this University or of any other recognised University, may be admitted to the examination for the Diploma in Journalism, provided he has prosecuted a regular course of study for two academic years, or such shorter period as may be determined by the Syndicate, in the Journalism Section of the University, and has also undergone a course of practical training in the office of a recognised Newspaper, Periodical or News Agency.

He shall be examined in—

Principles and History of Journalism.

The Making of a Journal.

General Knowledge of Political and Socio-Economic Developments.

General Outline of Constitutional Law and Laws of the Press.

Any one of the following—

(a) Literature and Art.

(b) Scientific and Cultural Trends.

(c) Sports, Stage and Screen.

(d) Editing of Monthlies and Periodicals.

Also any one following—

- (a) Business of Journalism.
- (b) Commercial Journalism.
- (c) Art of Advertisement and Layout.
- (d) Press and Production.

There shall also be an oral examination of two papers.

SCIENCE

Intermediate Examination in Science.—The course of study extends over two years after passing the Matriculation or the School Final Examination. The subjects of study and the scheme of examination are as follows:—(1) English (three papers), (2) a Vernacular Language (one paper), (3) Chemistry (two papers), (4) Mathematics or Physics (two papers) and (5) any one of the following (two papers): Mathematics (if not already taken), Physics (if not already taken), Botany, Zoology, Geology, Geography, Physiology, Biology, Anthropology, Psychology and Junior Military Course. Candidates may take an additional subject (two papers), if they so desire, included under 5, provided they have not already taken the subject, or French or German or Art and Architecture.

(Practical examinations are held in the Science subjects.)

For a pass, a candidate must obtain 30 per cent in each of the compulsory subjects taken up, and 34 per cent in the aggregate. A candidate is placed in the First Division if he obtains 50 per cent and the candidate who obtains 40 per cent is placed in the Second Division.

Intermediate Examination (Science) in Agriculture—The course of study extends over two years after passing the Matriculation or equivalent examination or one year after passing the I.A. or I.Sc. Examination. I.A.'s and I.Sc.'s will be exempted from attendance and examination in the subject or subjects already passed. The subjects of study are as follows:—Group I—Basic Sciences; Group II—Agricultural Economics and Rural Sociology; Group III—Farm Technology and Group IV—Languages. A candidate may take up an additional subject from amongst the following:—

- (i) Agronomy.
- (ii) Horticulture.
- (iii) Dairying.
- (iv) Poultry keeping.
- (v) Fishery.

Bachelor of Science (Pass and Honours).—The course of study extends over two years after the Intermediate Examination and candidates are allowed to study and be examined in any *three* of the following subjects: (1) Mathematics, (2) Physics, (3) Chemistry, (4) Botany, (5) Geology,

(6) Zoology, (7) Physiology, (8) Psychology, (9) Anthropology, (10) Geography, and (11) Statistics. No student will be permitted to take Mathematics or Geography if he has not taken it up for the Intermediate Examination. No student will be permitted to take up Physics or Chemistry unless he has taken up both Mathematics and Physics at the Intermediate Examination and no student can take up Psychology if he has not taken up Psychology or Physiology or Biology or Physics at the Intermediate Examination. No student will be allowed to take up Botany if he has not passed the I.Sc. Examination with Botany or Biology. No student will be permitted to take up Statistics if he has not taken up Mathematics at the Intermediate Examination. No student will be allowed to take up Physiology unless he has taken up Physics, Chemistry, Biology, Physiology or Mathematics at the I.Sc. Examination. In the Pass course there are three papers in each subject, of which except in Mathematics, two are theoretical and one is practical. For a pass a candidate must obtain 33-1/3 per cent in Mathematics, and 30 per cent in the theoretical papers of any other subject and 40 per cent in the practical papers. The number of papers set for the Honours course is six in Mathematics and four theoretical and two practical in the other subjects. Practical training has been introduced in the course of studies in Astronomy which is included as subject of study in the syllabus of Mathematics in the Honours course.

To obtain Honours, a candidate must obtain 40 per cent of marks in Mathematics and 40 per cent in the theoretical papers and 40 per cent in practical papers in any other subject. A candidate with an Honours subject obtaining 60 per cent marks in that subject and obtaining pass marks in other subjects will be placed in the First Class.

Master of Science.—It is a two years' course after the B.Sc. Examination, and the subjects of study and the scheme of examination are:—One of the following: (1) Pure Mathematics (eight papers), (2) Applied Mathematics, (3) Chemistry, (4) Physics, (5) Botany, (6) Physiology, (7) Zoology and Comparative Anatomy, (8) Geology, (9) Psychology, (10) Anthropology, (11) Statistics, (12) Geography and (13) Education. None but a Bachelor of Teaching or a B.A. with Education as one of his subjects will be allowed to take up Education. Distribution of papers and marks in these subjects is the same as noted in respect of these subjects for the *Master of Arts*.

Doctor of Philosophy in Arts and Science.—For particulars *vide* the same heading under Arts group.

Doctor of Science.—A Master of Science may be a candidate for the degree three years after the M.Sc. Degree. This is an examination by thesis, supplemented in the case of those who have passed the M.Sc. Examination in the Third Class and also in the case of those who passed the M.Sc. Examination in the Second Class if it is necessary, by an

examination, written, oral or practical. On the approval of the Syndicate the Degree of Doctor of Science is conferred.

A Doctor of Philosophy in Science may also be a candidate for this degree.

BACHELOR OF SCIENCE IN AGRICULTURE

The course consists of three parts, Preliminary, Part I and Part II. Any undergraduate who has passed the I.Sc. (Ag.) Examination may be admitted to the Preliminary course after prosecuting a regular course of study for one year. Therefore, he may appear at Part I and Part II Examinations after passing Preliminary and Part I Examinations, as the case may be, and each time he will have to attend one year's regular class preceding the examination. Successful candidates are required to undergo practical training for six months in an approved agricultural farm.

MASTER OF SCIENCE IN AGRICULTURE

The course consists of Part I and Part II Examinations. Any candidate passing B.Sc. (Ag.) Examination may be admitted to M.Sc. (Ag.) Part I Examination after prosecuting regular course of study for one year. On passing the same, he may be admitted to Part II Examination after two years' of regular study. Successful candidates are required to undergo one year's practical training in a farm or institution approved by the University.

DOCTOR OF PHILOSOPHY IN AGRICULTURE

Any Master of Science in Agriculture or a M.A. or M.Sc. in an allied subject may be a candidate for the degree. This is an examination by thesis and a candidate is required to work for two years under a teacher recognised by the University before submitting a thesis. If the thesis is approved, the candidate is to sit for an oral and/or practical examination.

TECHNOLOGY

B.Sc. (Tech.).—The subjects for the B.Sc. in Technology are :—

- (1) Textile Technology.
- (2) Leather Technology.
- (3) Jute Technology.

It is a three-year course open to I.Sc. passed candidates with Physics, Chemistry and Mathematics.

The examination shall be held in any one of the above subjects in two parts—Part I at the end of the second year and Part II at the end of the third year.

There shall be five theoretical papers and five practical papers for each of Part I and Part II Examinations. Each theoretical paper will

carry 100 marks, and out of 100 marks in each practical paper 40 marks will be set apart for sessional work of a candidate in the Laboratory or Workshop.

40 per cent of marks in the aggregate for the theoretical papers, 40 per cent of marks in the aggregate in the practical papers and 50 per cent of the total full marks will ensure a pass.

M.Sc. (Tech.).—The subjects for the M.Sc. (Technology) Examination are :—

- (1) Applied Physics.
- (2) Radio Physics and Electronics.
- (3) Applied Chemistry.

Or such other subject or subjects as may be determined by the Syndicate.

It is a three-year post-graduate course open to B.Sc.'s with Physics, Chemistry and Mathematics, preferably with Honours. B.Sc.'s in Technology may be admitted to the examination provided they have prosecuted a regular course of study for two years in an appropriate college or in the post-graduate classes of the University. The examination shall be held in any one of the above subjects in two parts—Part I at the end of the second year and Part II at the end of the third year.

For Part I there shall be five theoretical papers of 100 marks each and five practical papers of 100 marks each of which 20 marks shall be set apart for sessional work of the candidate.

For Part II there shall be three theoretical papers of 100 marks each of which two shall be set on the special subject a candidate may choose. The practical examination shall relate to the special subject of the candidate and carry 200 marks.

The minimum pass marks are as in B.Sc. (Tech.) Examination.

Certificate in Applied Psychology—The examination will be held annually. A candidate who has passed the M.A. or M.Sc. Examination in Psychology or B.A. or B.Sc. Examination with Psychology or the B.T. or M.B., B.S. Examination or who has satisfied the Examination Committee of the Council of Post-graduate Teaching in Arts that he has special qualifications for prosecuting the course, will be admitted to examination after prosecuting a regular course of study in Applied Psychology for one year in the Post-graduate Department of the University.

Diploma in Soap Technology.—Every candidate for the diploma shall satisfy the following conditions :—

- (i) That he has passed the examination for the Degree of Bachelor of Science with Mathematics, Physics and Chemistry.

(ii) That he has completed, since passing the aforesaid examination, a regular course of lectures, both theoretical and practical, in the subjects prescribed for the examination, for one academical year, in the University post-graduate classes or in an institution or institutions affiliated to, or recognised by the University for this purpose.

(iii) That he has attended, during the said period of one academical year a factory or factories recognised for the purpose, for a minimum period of two months for necessary training.

He shall be examined in—

- (i) Oils, Fats and Waxes.
- (ii) Soaps and Glycerine.
- (iii) Perfumes.
- (iv) Descriptive Engineering.
- (v) Statistics and Costing.

DIPLOMA COURSE IN APPLIED ANTHROPOLOGY

Any candidate who had passed the B.A. or B.Sc. Examination and is employed in Tribal Welfare work and has prosecuted a regular course of study in an institution recognised for the purpose for not less than nine months may be admitted to the examination. The course consists of three theoretical papers and one practical paper. In order to pass, a candidate must obtain 36 per cent in the theoretical and 40 per cent in the practical portions of the examination.

DIPLOMA IN INLAND FISHERIES

The course is divided into Junior and Senior Diploma courses. The Junior course is open to candidates who have passed the B.Sc. Examination with (a) Zoology, (b) Chemistry or Physiology and (c) Botany or have passed the B.Sc. (Ag.) Examination. The Senior course is open to candidates who have passed the M.Sc. Examination in Zoology with special paper in Fisheries or who have passed the Junior course. A candidate for admission to the Junior examination is required to prosecute a regular course of study for two years and for the Senior course one year.

EXAMINATIONS AND DEGREES LEADING TO PROFESSIONS COMMERCE

Bachelor of Commerce.—The course of study extends over two years after the Intermediate Examination. The subjects of study and the scheme of examination are as follows:—

- (1) English Composition, including essay, precis-writing, and drafting of business letters:
 - Essay—30 marks.
 - Precis-writing—30 marks.
 - Drafting of letters—40 marks—1 paper.

(2) One of the following languages :

Bengali, Assamese, Hindi, Oriya, Urdu, Malayalam, Telugu,
Kanarese, Gujerati, Tamil, Japanese, French, German,
Italian—1 paper.

(3) Accountancy—1 paper.

(4) Commercial Law—1 paper.

Group A—Papers (5) and (6) :

General Economics—1 paper.

Indian Economics—1 paper.

Group B.—Papers (7) and (8) :

Business Organization—1 paper.

Commercial Geography—1 paper.

Group C—Papers (9) and (10) :

Any one of the following :

(1) Advanced Accountancy—1 paper.

Auditing—1 paper.

(2) Trade and Tariff—1 paper.

Transport—1 paper.

(3) Banking—1 paper.

Currency—1 paper.

(4) Statistics—1 paper.

Insurance—1 paper

(5) Public Administration—1 paper.

Public Finance—1 paper.

(6) Land Systems—1 paper.

Agricultural Economics—1 paper.

(7) Economic History—1 paper.

Modern Industrial Organization with special reference
to India—1 paper.

Each paper shall be of three hours' duration and shall carry 100 marks.

In order to pass a candidate must obtain 30 per cent of the marks in each subject or group of subjects and 36 per cent of marks in the aggregate, provided that a candidate who takes up an Indian language must obtain 40 per cent of the marks in that subject. In order to be placed in the First Class, he must obtain 60 per cent of the marks in the aggregate.

TANNING

Certificate in Tanning.—It is a three years' course and any undergraduate of the University who has passed the Intermediate Examination with Physics, Chemistry and Mathematics and preferably with Botany or Zoology or Biology as an additional subject is eligible for admission to the course. The subjects for the examination are: (i) Principles and Methods of Leather Manufacture (2 theoretical and 1 practical paper); (ii) Analytical Chemistry of Leather Manufacture (1 theoretical and 1 practical paper); (iii) Statistics and Costing (half paper); (iv) Elementary Microscopy and Bacteriology (half theoretical and half practical paper); (v) Leather Trades Engineering (1 theoretical and 1 practical paper); and in order to pass the examination, a candidate must obtain 33 per cent of the marks in each subject. Candidates obtaining 45 per cent of the aggregate marks shall be placed in the Second Class and those obtaining 60 per cent in the First Class.

Arrangements are being made to start a Leather Technology Course up to the B.Sc. standard.

TEACHING

Licentiate in Teaching.—Any candidate may be admitted to the examination not less than one year after passing the Intermediate Examination in Arts or Science provided he has attended a regular course of lectures on the Arts and Theory of Teaching in a college or colleges affiliated in Teaching and, in addition, has undergone a course of practical training in practical skill in teaching. There shall be a written examination in (1) Principles of Education, (2) Methods of Teaching and School Administration, (3) History, (4) English Composition, and a practical examination for testing skill in teaching any three of the following subjects:—(i) English, (ii) Vernacular, (iii) a Classical or a Modern Language, (iv) History, (v) Geography, (vi) Mathematics, (vii) Science of Nature Study, (viii) Hygiene, (ix) Art or Manual work, (x) the Kindergarten System, (xi) Method of Teaching and Testing the Primary School subjects, Methods of Inspection, (xii) Music. For the written examination there shall be one paper in each of (iii) and (iv) and two papers in (ii). Each paper will carry 100 marks and 300 marks are assigned to the practical examination.

Bachelor of Teaching.—Any candidate may be admitted to the examination not less than one year after passing the B.A., B.Com. or B.Sc. Examination, provided he has attended a regular course of lectures on the Art, Theory and History of Teaching in a college or colleges affiliated in Teaching and has, in addition, undergone a course of practical training in practical skill in Teaching.

Any candidate who has passed the examination for the Licentiate in Teaching and has also graduated in Arts or in Science or in Commerce, may be admitted to this examination without compliance with the

conditions, provided that a candidate who is a Licentiate in Teaching and who has served in a recognized school for at least seven years, may appear at the examination for the Degree of Bachelor of Teaching without having passed the B.A., B.Com. or B.Sc. Examination and without compliance with the conditions laid down in the above paragraph.

Any graduate teacher of a recognized school may also appear at the B.T. Examination as a non-Collegiate student, he has served as a teacher for at least two years and has graduated with Honours or has obtained the degree of M.A. or M.Sc. in the First or the Second Class, or has passed the University Teachers' Training Certificate Examination with distinction or the school in which he serves is specially approved for the purpose.

Candidates will be examined in (1) Principles of Education, including Educational Psychology, (2) History of Education, (3) General Methods, School Organization and School Hygiene and (4) Contents and methods of teaching any three school subjects from the following list, Geography being considered as equivalent to two subjects (i) English, (ii) a Modern Indian Language—Bengali or Hindi, or Urdu, or Assamese, (iii) a Classical Language, (iv) a Modern European Language, (v) History, (vi) Geography, (vii) Hygiene, (viii) Mathematics, (ix) Arts and Crafts, (x) Music, (xi) Physical Sciences, (Physics, Chemistry and Astronomy), (xii) Biological Sciences (Botany, Zoology, Physiology) and Geology, (xiii) Primary and Infant School subjects; (5) Essay and Composition in one of the Modern Indian Languages (Bengali or Hindi or Urdu or Assamese). The candidate may, if he so desires, be also examined in one of the following subjects: (i) Mental and Educational Measurements, (ii) Social and Abnormal Psychology applied to Education, (iii) Mental Hygiene and Child Guidance, (iv) Method and Organization in Nursery Schools, Kindergarten and Montessori Schools, (v) Comparative Education with reference to selected countries in Europe and America, and (vi) Education of Handicapped Children. Each theoretical paper shall carry 100 marks; and 250 marks shall be allotted for the practical examination.

In order to pass a candidate should obtain 40 per cent of the marks in each of the written subjects and also in the practical examination. Candidates obtaining 540 marks shall be declared to have obtained a First Class and those obtaining 360 marks shall be declared to have obtained a Second Class.

English Teachership Examination.—This examination is held for granting certificates to candidates as competent to teach English in schools recognized by the University. The minimum qualification for admission to the examination is a pass at the Intermediate Examination and service as teacher for at least one year prior to the examination in a recognized school. Candidates who are graduates will be exempted from the requirement of one year's service as teachers. The examina-

tion shall be Written, Oral and Practical and shall be conducted on the lines of a syllabus to be drawn up by the Syndicate on the joint recommendation of the Boards of Studies in English and Teaching. The candidate must undergo a special course of training for at least eight weeks, organized or recognized by the University for the purpose of the examination. In order to pass in the written examination a candidate must obtain at least 60 marks out of 150 marks allotted for the examination, and 60 marks out of 150 marks in the oral examination and 100 marks out of 200 marks in the practical examination. In certain cases exemption is granted from the written examination.

Teachers' Training Certificate Examinations.—There are 4 categories of examinations under this: (A) Teachers' Training Certificate (General), (B) Teachers' Training Certificate (Science), (C) Teachers' Training Certificate (Geography), (D) Teachers' Training Certificate (Art Appreciation). At present there is no arrangement for teaching students and holding examinations for (A), (B) and (C).

Teachers' Training Certificate Examination (Art Appreciation).—The examination is open to any Matriculate who has served as a teacher of Drawing in a recognized school for at least one year and has undergone a short course of training for at least three months at the University. A candidate who has passed the Final Examination of any recognized school of Art will be allowed to appear without being required to serve as a teacher.

There shall be three theoretical papers of 100 marks each on the following subjects:—

- (i) (a) General Principles of Art.
(b) Principles of Indian Art.
- (ii) (a) Indian Sculpture.
(b) Indian Painting.
- (iii) (a) Architecture.
(b) Indian Art.

There shall be a practical examination with 100 marks assigned to it of which 50 marks will be set apart for practice teaching and class work.

LIBRARIANSHIP

Diploma in Librarianship.—Any candidate who has passed a degree examination in this University and prosecuted thereafter a course of study for not less than one year in the Librarianship Training Class organized by the University may be admitted to the examination. The training is both theoretical and practical. The examination will be held in the following subjects: (i) Classification, (ii) Cataloguing, (iii) Library organization and administration, (iv) Bibliography and Books election, (v) Reference Work, (vi) General Knowledge, (vii) Languages—

two of the following languages other than the candidate's mother-tongue—not more than one from one group—(A) French, German; (B) Bengali, Hindi, Urdu, Assamese; (C) Sanskrit, Arabic, Persian, Latin, Greek.

In order to pass, a candidate should obtain 40 per cent in each of the four subjects for the written examination and also in the practical examination. Candidates obtaining 60 per cent of the total marks will be declared to have obtained a First Class.

DOMESTIC SCIENCE

Diploma in Domestic Science Training.—A candidate who has passed the Intermediate Examination with Chemistry and has prosecuted a course of study in an institution recognized for the purpose, or a candidate who has passed the Intermediate Examination without Chemistry and has served for not less than two years as a *bona fide* teacher in a recognized or approved institution is eligible for admission to the examination if he has obtained a Diploma or a Certificate recognized by the University in any of the following subjects, viz.—(i) Teacher's Training, (ii) First Aid, (iii) Home Nursing, (iv) Needle Work, (v) Cookery, (vi) Arts or Crafts or any other subject that may be regarded by the Syndicate as equivalent thereto. The course of studies is—*Theoretical*:—(i) Theory and Practice of Teaching including school organisation (one paper), (ii) Home Life and Child Psychology (one paper), (iii) Hygiene and Home Nursing (one paper), (iv) Home Organisation, House Craft and Laundry work (one paper), Cookery (one-half paper), Needle work and Designing (one-half paper). There is a practical examination in each of the subjects under (iv). Each paper is of 100 marks and each half-paper 50 marks. A candidate will be required to prepare, for presentation to the examiners, before the final practical examination, full teaching notes in each of the subjects under (iv). In order to pass a candidate must obtain 40 per cent of the marks in each of the theoretical subjects and also in each of the subjects for the practical examination. Candidates obtaining 420 marks shall be declared to have passed with Distinction and those obtaining 280 marks shall be declared to have passed.

SOCIAL WORK

Diploma in Social Work (Labour Welfare).—Any candidate who has passed an examination for a Bachelor's Degree in any Faculty of this University or who is accepted by the Social Work Committee on the ground that he has worked for at least a period of one year as Labour Welfare Officer in approved institutions, associations or firms employing labour, may be admitted to the examination for the Diploma in Social Work, provided he has prosecuted a regular course of study for one academic year or such shorter period as may be determined by the Syndicate and has undergone a practical training in an industrial area or areas or labour welfare centres.

He shall be examined in (i) Sociology, (ii) Applied Economics, (iii) Laws relating to Industries, (iv) Statistics, (v) Social and Industrial Psychology and (vi) Public Health Administration and Food and Nutrition.

The written examination shall consist of six papers and the oral examination, of four papers.

In order to pass a candidate must obtain 40 per cent of marks in each paper and 50 per cent of marks in the aggregate. Candidates obtaining 60 per cent of the marks in the aggregate shall be placed in the First Class; others in the Second Class.

DIPLOMA COURSE IN BUSINESS MANAGEMENT

The course is divided into two parts, Part I and Part II. Any candidate who has passed an examination for Bachelor's Degree in any Faculty or who has worked for at least a period of three years in an executive position in approved institutions, associations or firms may be admitted to the examination on his attending a regular course of study for one year. He shall be examined in four theoretical papers under Part I and in three papers under Part II. There shall also be an oral examination. To obtain a pass, a candidate must get 40 per cent of marks in each papers and 50 per cent in the aggregate.

LANGUAGES

Certificate in Language *.—The examination is open to any graduate of any Faculty who has prosecuted a regular course of study for one year after graduation in the University or in an Institution recognized by the University.

A candidate has to choose and offer one of the undermentioned languages for the examination—

- (1) French, (2) German, (3) Russian, (4) Chinese, (5) Tibetan, (6) Spanish, (7) Portuguese, (8) Italian, (9) Persian, (10) Arabic, (11) Burmese, (12) Japanese, (13) Indonesian (Malay), (14) Any one of the following Modern Indian Languages for those whose mother-tongue is not any one of these:—

(a) Bengali, (b) Hindi, (c) Urdu.

The examination shall be written and oral. The written portion will have two papers of 100 marks each and Oral will carry 100 marks. The minimum pass marks are 45 per cent of the total marks. 75 per cent is the minimum for a First Class and 60 for a Second Class.

Diploma in Language *.—Any graduate of any Faculty after having passed the Certificate Examination in a Language and on completion of a

* At present only French, German, Russian, Chinese, Tibetan and Hindi are taught in the University classes.

regular course of studies for one year in one of the subjects may take this examination. The Languages are the same as given above.

The examination shall be written and oral. The written portion will comprise three papers of 100 marks each and the oral will carry 200 marks.

The minimum for a Pass is 45 per cent, for a First Class 75 per cent, and for a Second Class 60 per cent of the total marks.

LAW

Bachelor of Laws.—It is a three years' course and graduates in Arts, Science, Commerce, Medicine and Engineering are eligible for admission to this course of study and have to pass in succession (1) Preliminary Examination, (2) an Intermediate Examination, and (3) a Final Examination. In all these examinations, there may, in addition to the written examination, be an Oral test. The subjects of study and the scheme of examination are as follows:—*Preliminary Examination*: (1) Jurisprudence (one paper), (2) Roman Law (one paper), (3) Hindu Law (one paper), and (4) Constitutional Law (one paper). *The Intermediate Examination*: (1) Muhammadan Law and Law relating to persons (one paper), (2) The Law relating to Property, including Law of Transfer, *inter vivos* (one paper), (3) and (4) Principles of English Law of Real Property and Law of Interstate and Testamentary Succession (one paper), and (5) The Law of Contracts and Torts (one paper). *The Final Examination*: (1) The Law relating to Property, including the Law of Land Tenures, Land Revenue and Prescription (one paper), (2) The Principles of Equity, including the Law of Trusts (one paper), (3) The Law of Evidence and the General Principles of Civil Procedure and Limitation (one paper), and (4) The Law of Crimes and the General Principles of Criminal Procedure (one paper).

In order to pass the Preliminary, Intermediate or Final Examination, a candidate must obtain 30 per cent in each paper and 50 per cent in the aggregate. A candidate obtaining 67 per cent will be placed in the First Class.

Master of Laws.—Any person who has obtained the Degree of Bachelor of Laws, may offer himself as a candidate for the examination for the Degree of Master of Laws. The subject of study and the scheme of examination are as follows:—A candidate will be examined in the following subjects, besides on oral test if the examiners think it necessary: (1) Hindu Law or Muhammadan Law (one paper), (2) Jurisprudence and Principles of Legislation (one paper), (3) Principles and History of Roman Law (one paper), (4) Private International Law (one

paper), (5) and (6) Any two of the following subjects (two papers) : (a) Principles of Equity, (b) The Law relating to the Transfer of Immovable Property and the Law of Prescription, (c) The Law relating to Wills, (d) The Law of Contracts and Torts, (e) Principles and History of the Law of Real and Personal Property, (f) Principles and History of the Law of Evidence, and (g) History of English Law.

In order to pass the examination, a candidate must obtain 50 marks in each paper, and to be ranked in the First Class he must obtain 400 marks in the aggregate.

Doctor of Laws.—It is open to all Masters of Laws of this University provided one year has elapsed since they obtained their Masters' Degree. This is an examination by thesis, which may be supplemented by an examination, written, oral, or both, according as the Board of Examiners appointed to report on the merits of the thesis may think fit. If the Syndicate, upon the report, consider the candidate worthy of the Degree of Doctor of Laws, the candidate is admitted to the degree.

MEDICINE

The M.B.B.S. Course consists of three stages: (i) First M.B.B.S. Examination, (ii) Final M.B.B.S. Examination, and (iii) Attendance at a recognized hospital for six months after Final M.B.B.S. Examination for clinical instruction. Qualifications for admission to the course are (a) a pass at the Intermediate Examination in Science with Physics, Chemistry and Biology including Practical Tests and (b) attainment of the age of 17 years on the 31st of December of the year of his admission to the college, if not already attained.

The First M.B.B.S. Course consists of not less than two years of study, theoretical and practical, in the following subjects: Part I—Organic and Physical Chemistry, Part II—(i) Anatomy, (ii) Physiology, (iii) Elementary Pharmacology. The examination shall be Written, Oral and Practical. In assessing the marks the Examiners are to take into account duly attested records of work done in the practical classes by the candidate. The Final M.B.B.S. Course consists of two parts covering a total period of not less than three years after passing the First M.B.B.S. Examination. The two parts consist of: Part I—Group A:—Pathology, Bacteriology and Parasitology. Group B:—Preventive and Social Medicine. Group C:—Forensic and State Medicine.

Part II—Group A:—(i) Medicine including Applied Anatomy and Physiology, Clinical Pathology, Children's diseases, Skin diseases and Mental diseases. (ii) Pharmacology and Therapeutics. Group B:—(i) Surgery including Applied Anatomy and Physiology, Clinical Patho-

logy, Radiology, Orthopaedics, Venereal diseases, Dental diseases and Surgical diseases of infancy and childhood. (ii) Ophthalmology and Diseases of Ear, Nose and Throat. Group C:—Obstetrics and Gynaecology, and Infant Hygiene including Applied Anatomy and Physiology and Clinical Pathology.

The course of instruction after passing the Final M.B.B.S. Examination in Part I and Part II consists in attendance at Practical clinical instruction for a period of six months in the wards of a hospital specially recognized for the purpose. A part not exceeding one month of the post-clinical period should be spent in a hospital for special diseases.

In order to pass the Final M.B.B.S. Examination, a candidate must pass in all groups in both Part I and Part II. A candidate who fails to pass either in Part I or Part II may be examined in that part and in the group or groups in which he has failed. The examination shall be completed within 19 months from the date of appearing at Part II of the Final M.B.B.S. Examination. After 19 months, a candidate is required to prosecute further studies in all the subjects under Part II for a specified period.

The full marks for each subject and the minimum marks required for passing are as follows:—

PART I

	Written, Full marks.	Oral, Full marks	Written, Pass marks.	Oral, Pass marks.	Written and Oral, Pass marks.	Practical and Clinical, Full marks.	Practical and Clinical, Pass marks.	Total, Full marks.	Total, Pass marks.
Pathology, Bacteriology and Parasitology	.. 100	50	..	..	60	50	25	200	100
Preventive and Social Medicine	.. 100	54	40	20	..	..	..	150	75
Forensic and State Medicine	.. 100	50	40	20	..	..	..	150	75

PART II

	Written, Full marks.	Oral, Full marks	Written, Pass marks.	Oral, Pass marks.	Written and Oral, Pass marks.	Practical and Clinical, Full marks.	Practical and Clinical, Pass marks.	Total, Full marks.	Total, Pass marks.
Medicine	.. 200	100	..	..	120	200	100	500	250
Pharmacology and Therapeutics	.. 100	50	40	20	..	..	..	150	75
Surgery	.. 200	100	..	..	120	200	100	500	250
Ophthalmology and Diseases of Ear, Nose and Throat	. 100	50	.	..	60	50	25	200	100
Obstetrics and Gynaecology and Infant Hygiene	.. 200	100	.		120	200	100	500	250

Condensed Medical Course .—A condensed M.B.B.S. Course has been formulated for the period of war and three years thereafter for the benefit of the following candidates:—(a) a candidate who holds a License or a Diploma in Medicine by an Examining Body in British India registered under any of the Provincial Medical Council Acts and has passed the Matriculation Examination or an examination equivalent thereto or the Cambridge School Certificate Examination in certain specified subjects, or (b) a candidate who has held a commission as a Medical Officer in H. M. Indian Army and had passed, previous to commencing his study of medicine for the acquisition of qualification registrable under the Provincial Medical Council Acts, an examination of the Matriculation standard with Mathematics. Such candidates may be admitted to the Final M.B.B.S. Examination, if the following conditions are fulfilled:—(i) attended in a College of Medicine affiliated to the M.B.B.S. standard a course of instruction for at least six months in Anatomy, Physiology, Materia Medica, Pharmacology including Bio-

* Some changes in the Regulations relating to this course are awaiting final selection by Government.

† It has been decided that candidates will be admitted to this course upto the end of April, 1956.

chemistry and (ii) attended for a period of at least 24 months, a course of studies in the subjects enumerated in Part I and Part II of Section 3 of the Regulations for the Final M.B.B.S. Examination, provided that a candidate who is a holder of a Diploma under the Provincial Medical Councils Acts after passing medical studies for five years will be given concession of six months in the period of about 24 months. This concession will also be granted to Licentiate Officers of the I.A.M.C., who had received three months intensive training of the Army Medical Training Centre at Poona and passed the examination held after the course. Other provisions of the Final M.B.B.S. Regulations will apply to all these candidates.

DOCTOR OF PHILOSOPHY IN MEDICINE

Any M.B.B.S. or L.M.S. passed student may be a candidate after working for two years under a teacher recognised by this University. This is an examination by thesis supplemented by an oral and/or a practical examination.

Diploma in Public Health.—The course is open to any Bachelor of Medicine or Licentiate in Medicine and Surgery on production of certificates of having, subsequent to passing the M.B.B.S. or L.M.S. Examination—

- (i) attended, during a period of not less than six months, approved courses of instruction in (a) Bacteriology including Immunology and Serology, Filterable Viruses and the Rickettsias, Medical Entomology, Proto-zoology and Helminthology especially in their relation to diseases of man and to those diseases of the lower animals transmissible to man—this course to last at least 200 hours; (b) Public Health, Chemistry and Physiology (Bio-Chemistry and Bio-Physics) applied to Public Health—this course to last at least 160 hours;
- (ii) been diligently engaged for at least six months in acquiring practical knowledge of the duties (routine and special) of public health administration under the supervision of a recognised Medical Officer of Health of a town or sanitary area of not less than fifty thousand inhabitants, who shall certify that the candidate has received from this officer or from other competent Medical Officer during not less than three hours on each of 60 working days, instruction in these duties (a candidate who produces evidence that he has been in independent sanitary charge of a town or district may under very special circumstances be exempted from this rule);
- (iii) attended for three months in the clinical practice of a recognized hospital for infectious diseases and has received therein instruction in the methods of administration (at least 30 days'

attendance of not less than two hours each day shall be required) ;

- (iv) received during not less than 80 hours, at an institution or from teachers approved by the University, instructions in the following subjects :—

The Principles of Public Health and Sanitation ..	30 hours
Epidemiology and Vital Statistics ..	20 hours
Sanitary Law and Administration ..	20 hours
Sanitary Construction and Planning ..	10 hours

- (v) practised the medical profession for a continuous period of one year and a half which may include the period of training specified above. Provided that a candidate may appear in Part I (but not in Part II) of the examination on the completion of a year of practice. Provided also that a candidate may not appear in Part II until he has passed in Part I of the Examination.

The subjects of study and the scheme of examination are as follows :—

Part I

- (a) Microbiology including Bacteriology, Immunology and Serology Filterable Viruses and the Rickettsias, Medical Entomology, Protozoology and Helminthology (one paper).
 (c) Public Health, Chemistry and Physiology (Bio-Chemistry and Bio-Physics) applied to Public Health (one paper)

Part II

- (c) Hygiene and Sanitation including Sanitary Engineering (one paper).
 (d) Epidemiology and Infectious Diseases (one paper).
 (e) Sanitary Law, Vital Statistics and Public Health Administration (one paper).

The examination may be written, oral and practical and shall include Food Inspection and Sanitary Inspection of factories, schools, premises or areas.

In order to pass the examination a candidate must obtain 50 per cent marks in each paper of both parts.

Diploma in Gynaecology and Obstetrics.—The course includes (a) service as a House Surgeon for at least six months in an Obstetrics and Gynaecological Hospital or Ward of a Hospital recognised for the purpose, (b) attendance thereafter, for a period of one year, at 40 lectures and 40 demonstrations in a recognised institution, in (i) Practice of Midwifery, (ii) Practice of Gynaecology, (iii) Anatomy of Female Pelvis,

(iv) Elementary Embryology, (v) Pathology of Female organs, (vi) Ante-Natal Pathology and (c) performance during this period of not less than six obstetrical operations and conducting of at least two labour cases under the supervision of the Medical Staff of the recognised institution. If the requirement of service as a House Surgeon as in (a) above is not fulfilled the candidate will have to attend lectures and demonstrations in a recognised institution for a further period of six months in the subjects mentioned above. The examination is written, oral and clinical and will be on (1) Obstetrics (one paper) and (2) Gynaecology and Diseases of a new-born Child (one paper). The course is open only to Bachelors of Medicine and Surgery or Licentiates in Medicine and Surgery.

Pass marks are 50 per cent of marks in written and oral portions combined and 50 per cent in the clinical portion.

Diploma in Ophthalmic Medicine and Surgery.—The examination shall be held twice a year. It shall be divided into two parts, Part I and Part II. The course of study is open to any Bachelor of Medicine or Licentiate in Medicine and Surgery.

The course and subjects are as follows:—

Part I

- | | | | | |
|--------------------------------------|------|----|----|---------|
| (a) Anatomy of the Eye | .... | .. | .. | 1 paper |
| (b) Physiology and Elementary Optics | .. | .. | .. | 1 paper |

Part II

- | | | | | |
|--|----|----|----|---------|
| (a) Ophthalmic Medicine and Surgery including Optical defects | .. | .. | .. | 1 paper |
| (b) Relations of Ophthalmology to General Medicine and Surgery | .. | .. | .. | 1 paper |
| (c) Pathology and Bacteriology with reference to Ophthalmology | .. | .. | .. | 1 paper |

The examination shall be written, oral, clinical and practical.

Minimum pass marks are 50 per cent of the total marks.

Diploma in Maternity and Child Welfare—The examination shall be held annually and is open to any Bachelor of Medicine and Surgery or Licentiate in Medicine and Surgery after he has attended a prescribed course of instruction in an approved institution and also completed attendance for a specified period at a recognised Infectious Diseases Hospital or Ward of a Hospital and practised the Medical Profession for a continuous period of one year and a half (including the period of training specified above). He shall also be engaged during the period of training, for not less than six months in acquiring practical knowledge of these duties of Public Health Administration under the supervision of Medical Officers of Health. He will be examined in—(a) Preventive Obstetrics, Preventive Pediatrics, Child Psychology, (b) Physiological

Hygiene and Nutrition, (c) Environmental Hygiene, Public Health Law and Administration, (d) Organisation of the Maternity and Child Health and School Health Services.

Minimum pass marks are 50 per cent of the total marks.

Diploma in Tuberculous Diseases.—The examination shall be held annually and is open to any M.B.B.S. or L.M.S., provided he has received training for a period of nine months according to the Regulations laid down. He will be examined in (i) Pulmonary Tuberculosis (including its Epidemiology, Pathology, Bacteriology, Symptomatology, Differential Diagnosis, Treatment, Aftercare, Prevention and Method of Surgery, (ii) Non-Pulmonary Tuberculosis (including Glandular, Osteo-articular, Cutaneous, Ocular, Laryngeal, Intestinal, Genito-Urinary and other localisation). Examination shall be written, oral and practical.

Minimum pass marks are 50 per cent of the total marks.

Diploma in Child Health.—Any M.B.B.S. or L.M.S. who after taking his degree at least two years previously, (i) (a) has spent at least one year for not less than six hours a week in Post-Graduate Study in Pediatrics at a Hospital and spent three months in study of General Medicine at a Hospital or recognised Institution; or (b) has held at least for six months a House Physician's appointment and spent at least six months for not less than six hours a week in Post-Graduate Study of Pediatrics; (c) has held for at least six months a House Physician's appointment in a Children's Hospital or in the Pediatrics Department of a General Hospital and spent, at least six months for not less than six hours a week in Post-Graduate Study of Pediatrics and spent three months in the study of General Medicine at a recognised Hospital or Institution, (ii) has put in 20 attendances of not less than one hour each in the study of Infectious Diseases at a recognised Hospital or Institution, (iii) has spent six weeks in study at an approved Child Welfare Centre or carried out at least one Infant Welfare Survey, (iv) satisfactorily completed courses of special instruction of not less than 40 hours in the prescribed syllabus, (v) attended for a period of not less than 20 hours a practical course of Pathology and Bacteriology, may be admitted to the examination.

The examination shall be Written, Oral and Practical. The written part will have four papers of 100 marks each, the Oral part will carry 100 marks and the Practical part, 200 marks. In order to pass a candidate must obtain 50 per cent of the total marks in Written and Oral and 50 per cent in the Practical.

Diploma in Industrial Health.—Any M.B.B.S or any physician who has passed an equivalent examination may be admitted to this examination on production of a certificate of having (i) undergone clinical training as a House Physician or Surgeon for one year; (ii) attended for not less than four months approved courses of instruction in (a) Com-

municable Diseases, (b) Environmental Sanitation, (c) Public Health Administration; (iii) or as an alternative to (ii) obtained the Diploma in Public Health or a qualification recognised as equivalent, (iv) attended for five months prescribed courses of instruction in (a) Industrial Law, Labour Relations etc., (b) Industrial Hazards, (c) Applied Physiology including Psychology, (d) Occupational Diseases and Industrial Medicine.

The examination is divided into two parts—Part I will have three Written papers of 50 marks each and will include Oral test carrying 100 marks. Part II will comprise the following:—

Industrial Hygiene—divided into 4 groups of 50 marks each. Laboratory Records and Field Reports carrying 100 marks and Oral Examination carrying 100 marks.

40 per cent of the total marks in each of the above and at least 50 per cent of the aggregate will entitle a candidate to a pass.

Bachelor of Dental Surgery.—The entire course is divided into 4 parts as detailed below. Any I.Sc. passed candidate (with Physics, Chemistry and Biology) of at least 17 years who has completed his studies for one academical year in an affiliated College of Dentistry may be admitted to the First Professional Examination. A candidate on passing the First Professional Examination and on completion of one year's course will take the Second Professional Examination. Similarly he will have to appear at the Third Professional and Final Professional Examinations. The examinations will be Written, Oral and Practical as detailed in the relevant regulations.

DEGREE COURSE IN VETERINARY SCIENCE

Any candidate after passing the Intermediate Examination in Science with Physics, Chemistry and either Biology or Botany and Zoology as subjects may be admitted to the degree course. The course extends over a period of four years and consist of three examinations, viz., First, Second and Final B.V.Sc. Examinations. No candidate shall be eligible to appear at the Second and Final Examinations unless he previously passed the First and the Second B.V.Sc. Examination.

Diploma in Medical Radiology and Electrolgy.—The examination shall be held in 2 parts—Part I having 3 papers and Part II, 5 papers. The examination shall be Written, Oral and Practical with total full marks of 600 for Part I and 1000 for Part II.

Any M.B.B.S. or L.M.S. having at least two years. Post-graduate experience, including house appointments for one year and also having thereafter

(i) attended, during a period of six months, in a recognised institution—

(a) a course of lectures and practical instruction in Physics and Electronics as applied to medical Radiology;

- (b) a course of lectures, demonstrations, etc. in Pathology and Anatomy in relation to Radiology ;
 - (b) a course of lectures, demonstrations, etc., in Pathology and
 - (c) an introductory course of clinical instructions in Medical Radiology and Electrology ; and
- (ii) attended, during a period of 18 months—
- (a) a course of lectures, demonstrations and practical instruction in Diagnostic Radiology with clinical practice in the Radiological Department of a recognised Hospital with not less than 500 beds ; and
 - (b) a course of lectures, demonstrations and practical instruction in Roentgen and Radium Therapy, etc., may be admitted to the examination.

Doctor of Medicine, Master of Surgery, Master of Obstetrics.—These are examinations by thesis supplemented by written, oral and practical examinations. They are open to such Bachelors of Medicine and Surgery as fulfil certain specified conditions.

Doctor of Science (Public Health).—This is an examination by thesis supplemented by written examination. The candidate may be required to undergo an oral and practical examination at the discretion of the examiners. It is open to any Bachelor of Medicine and Surgery or Licentiate in Medicine and Surgery who obtains a Diploma in Public Health or passes an examination equivalent to it and fulfils certain other specified conditions.

Intermediate Examination in Nursing.—The course of study extends over two years after passing the Matriculation or equivalent Examination, and is as follows :—

1st year—Literature, Social Welfare, Psychology, Anatomy and Physiology, Preventive and Social Medicine, Physics and Chemistry, Medicine.

Nursing—Principles of Nursing (History of Nursing, Massage, Medical Nursing).

Practice in Nursing (Medical).

2nd year—Literature, Sociology, Food Chemistry, Medicine and Surgery, Dietetics and Nutrition, Physiology, Psychiatry.

Nursing—History of Nursing Practice, Practice in Nursing (Medical including Leprosy).

Bachelor of Nursing.—The course of study extends over two years after passing the Intermediate Examination in Nursing and is as follows :—

3rd year—History, Economics, Child Psychology and Paediatrics, Principles of Public Health Nursing, Bacteriology, Pharmacology.

Nursing—Tuberculosis Nursing, Children's Nursing, Surgical and Infectious Diseases Nursing.

4th year—History, Sociology, Educational Psychology and Principles of Teaching.

Nursing—Principles of Public Health Nursing, Teaching Practice, Midwifery, Obstetrical Nursing, Obstetrical Nursing Practice and Public Health Nursing Practice, Mental Nursing Practice.

Diploma in Dietetics.—The course extends over one year after passing (1) M.B.B.S., (2) B.A. or B.Sc. with Physiology or Chemistry, (3) Diploma in Domestic Science or (4) Bachelor of Nursing, and is as follows:—

Written Papers

		Maximum marks	Pass marks
Paper I—Science of Nutrition	..	50	25
Paper II—Applied Nutrition	..	50	25
Paper III—General Dietetics	..	50	25
Paper IV—Applied Dietetics	..	50	25

Practicals

Practical examination in Nutrition	..	100	50
Practical examination in Dietetics		100	50

(Candidates will be required to prepare diets on the advice of physician for a particular disease)

<i>Viva Voce</i>	..	100	50
Total	..	<hr/> 500 <hr/>	<hr/> 250 <hr/>

In order to pass, a candidate must obtain 50 per cent in each of the theoretical and practical subjects.

DIPLOMA IN NUTRITION

The examination is divided into two parts—Part I and Part II. Any graduate in Medicine or Master of Science in Physiology or Chemistry or Bachelor of Agriculture or Bachelor of Veterinary Science may be admitted to this examination after attending approved courses of instruction. A candidate may not appear in Part II until he has passed in Part I of the examination.

DIPLOMA IN TROPICAL MEDICINE AND HYGIENE

Any M.B.B.S. or L.M.S. passed student after receiving instructions for a period of nine months in a recognised institution in (a) Tropical Medicine, (b) Tropical Pathology and Bacteriology and (c) Medical Para-

sitology and Entomology may be admitted to this examination. The course of teaching consisting of theoretical lectures, clinical instructions and practical classes.

DIPLOMA IN ANAESTHESIA

Any Bachelor of Medicine and Surgery who after passing the M.B.B.S. Examination worked as a (i) Resident House Surgeon in a recognised hospital for six months or as an (ii) Anaesthetist for one year may be admitted to this course. The course is divided in two parts, viz., Part I and Part II. A candidate may appear in Part I on completion of six months' training and after passing the same he may appear at Part II examination on completion of another six months' training.

ENGINEERING

Bachelor of Engineering, Part I.—Any undergraduate or graduate of the University who has passed the Intermediate Examination with Mathematics, Chemistry and Physics may be admitted to the examination, provided he has prosecuted a regular course of study in a College of Engineering affiliated to the University for two academic years after passing the Intermediate Examination.

Every candidate for the B.E. Part I Examination shall be examined in the subjects mentioned below:—

- (i) English, Current Orientation and Civics.
- (ii) Engineering Physics (paper).
- (iii) Engineering Physics (Sessional and Practical).
- (iv) Engineering Chemistry (paper).
- (v) Engineering Chemistry (Sessional and Practical).
- (vi) Mathematics—paper I.
- (vii) Mathematics—paper II.
- (viii) Surveying (paper).
- (ix) Surveying (Sessional and Practical).
- (x) Details of Construction and Estimating
- (xi) Drawing (paper). ..
- (xii) Drawing (Sessional).
- (xiii) Heat Engines I (paper).
- (xiv) Heat Engines (Sessional).
- (xv) Applied Mechanics I and Graphics (paper).
- (xvi) Applied Mechanics I and Graphics (Sessional).
- (xvii) Electro-Technology (paper).
- (xviii) Electro-Technology (Sessional and Practical).
- (xix) Sociology and Industrial Relations.
- (xx) Workshops (Sessional).

In order to pass in Part I, 40 per cent of the full marks (2000) and half of the aggregate of total marks must be obtained.

Part II

Any undergraduate or graduate of the University may be admitted to this examination, provided he has prosecuted a regular course of study in an affiliated College of Engineering for two academic years in the particular branch of the B.E. Part II Examination in which he presents himself for examination after passing the B.E. Part I Examination.

The examination will be held in the following branches :—

- (a) Civil Engineering
- (b) Mechanical Engineering.
- (c) Electrical Engineering.
- (d) Metallurgical Engineering.

The subjects prescribed for the B.E. Part II Examination and distribution of marks in the respective branches of Engineering are as follows:—

(A) CIVIL ENGINEERING

- (i) Economics and Accounts.
- (ii) Applied Mechanics (Strength of Materials).
- (iii) Geodesy (paper).
- (iv) Geodesy (Sessional and Practical).
- (v) Geology.
- (vi) General Civil Engineering (paper I).
- (vii) General Civil Engineering (paper II).
- (viii) Structures and Designs (paper I).
- (ix) Structures and Designs (paper II).
- (x) Structures and Designs (Sessional).
- (xi) Applied Mechanics (Hydraulics).
- (xii) Applied Mechanics (Sessional).
- (xiii) Planning, Layout and Estimating.
- (xiv) Elective.
- (xv) Project and Thesis (Sessional).

Electives :—

- (a) Railway and Highway Engineering
- or (b) Sanitary Engineering
- or (c) Irrigation and Flood Control
- or (d) Water Power Engineering
- or (e) Advanced Building Construction and Architectural Design.

(B) MECHANICAL ENGINEERING

- (i) Economics and Accounts.
- (ii) Applied Mechanics (Strength of Materials).
- (iii) Metrology.
- (iv) Metrology (Sessional and Practical).

- (v) Electro-Technology (paper).
- (vi) Electro-Technology (Sessional and Practical).
- (vii) Heat Engines II.
- (viii) Heat Engines III.
- (ix) Heat Engines (Sessional).
- (x) Applied Mechanics (Theory of Machines).
- (xi) Applied Mechanics (Hydraulics).
- (xii) Applied Mechanics (Sessional).
- (xiii) Works Organisation and Management.
- (xiv) Workshop Theory.
- (xv) Drawing and Design.
- (xvi) Elective.
- (xvii) Project and Thesis (Sessional).

Electives :—

- (a) Production Engineering
- or (b) Machine Tools.
- or (c) Automobile Engineering
- or (d) Refrigeration and Air-conditioning.

(C) ELECTRICAL ENGINEERING

- (i) Economics and Accounts.
- (ii) Applied Mechanics (Strength of Materials).
- (iii) Heat Engines II (paper).
- (iv) Heat Engines II (Sessional).
- (v) Mathematics.
- (vi) Advanced Electro-Technology.
- (vii) Electrical Machines (paper).
- (viii) Electrical Machines (Sessional).
- (ix) Switchgears and Instruments.
- (x) Switchgears and Instruments (Sessional).
- (xi) Applied Mechanics (Hydraulics).
- (xii) Applied Mechanics (Sessional).
- (xiii) Works Organisation and Management.
- (xiv) Transmission and Distribution of Electrical Power.
- (xv) Planning and Design of Power Systems.
- (xvi) Elective.
- (xvii) Project and Thesis (Sessional).

Electives :—

- (a) Electrical Communication
- or (b) Electric Traction
- or (c) Illumination Engineering
- or (d) Hydro-electric Plants.

(D) METALLURGICAL ENGINEERING

- (i) Economics and Accounts.
- (ii) Refractories, Furnaces and Fuels (paper).
- (iii) Refractories, Furnaces and Fuels (Sessional).
- (iv) Inorganic and Physical Chemistry (paper).
- (v) Inorganic and Physical Chemistry (Sessional and Practical).
- (vi) Geology, Mineralogy and Dressing of Materials (paper).
- (vii) Geology, Mineralogy and Dressing of Materials (Sessional).
- (viii) Electrical Engineering.
- (ix) Metallurgy of Iron and Steel.
- (x) Metallurgy of non-ferrous Metals.
- (xi) Assaying and Metallurgical Analysis (paper).
- (xii) Assaying and Metallurgical Analysis (Sessional and Practical).
- (xiii) Works Organisation and Management.
- (xiv) Electro-Metallurgy and Mechanical Working and Testing of Metals.
- (xv) Electro-Metallurgy and Mechanical Working and Testing of Metals (Sessional).
- (xvi) Metallography Heat Treatment and Pyrometry (paper).
- (xvii) Metallography Heat Treatment and Pyrometry (Sessional and Practical).
- (xviii) Elective.
- (xix) Project and Thesis (Sessional).

Electives :—

- (a) Advanced Metallurgy of Alloy Steel
- or (b) Advanced Metallurgy of non-ferrous alloys.
- or (c) X-Ray Crystallography and Spectroscopy of metals and alloys.

In order to pass, 40 per cent of marks in each subject and half of the aggregate are required.

Bachelor of Architecture.—Any undergraduate of the University may be admitted to the examination provided he has prosecuted a regular course of study for not less than five academical years in the prescribed subjects in an institution affiliated to the University for the purpose after passing the Intermediate Examination in Science with Physics, Chemistry and Mathematics.

The examination for the Degree of Bachelor of Architecture shall be divided into three parts, viz. :

- (i) Part I—Examination to be taken at the end of the First year.
- (ii) Part II—Examination to be taken at the end of the Third year provided the candidate has already passed the Part I Examination.
- (iii) Part III—Examination to be taken at the end of the Fifth year provided the candidate has already passed the Part II Examination.

Master of Architecture.—Any candidate who has passed the Degree of Bachelor of Architecture not less than two years previously may offer himself as a candidate for the Degree of Master of Architecture.

Every candidate shall state in his application the special subject within the purview of the regulations for the Degree of Bachelor of Architecture, upon a knowledge of which he rests his qualification for the Master's Degree, and shall, with the application, transmit three copies, printed or type-written, of a constructive thesis that he has composed treating scientifically some special portion of the subject so stated, embodying the result of research, or showing evidence of his own work, whether based on the discovery of new facts observed by himself or of new relations of facts observed by others or tending generally to the advancement of Indian architecture. The candidate shall indicate generally in a preface to his thesis and specially in notes, the sources from which his information is taken, the extent to which he availed himself of the work of others, and the portions of the thesis which he claims as original: he shall further state whether his research has been conducted independently, under advice, or in co-operation with others, and, in what respects his investigations appear to him to tend to the advancement of Indian Architecture.

Master of Planning.—A candidate who has passed the Degree of Bachelor of Architecture may be admitted to the examination for the Degree of Master of Planning, provided he has undergone a course of Post-graduate training for a period of two years in the prescribed subjects in the University or in an Institution recognised for the purpose to the satisfaction of the Head of the Institution.

The subjects for the examination are—

Group I

1. History of Planning.
2. Philosophy of Planning.
3. Regional Characteristics.
4. Planning in relation to Resources—
 - (a) Industry
 - (b) Agriculture
 - (c) Irrigation
 - (d) Communication
 - (e) Forestry
 - (f) Geology

Group II

Planning in relation to Social Organisation—

- (a) Culture and Religion
- (b) Politics
- (c) Economics
- (d) Sociology
- (e) Law
- (f) Administration

Group III

Planning in relation to Technical Methods—

- (a) Agriculture
- (b) Civil Engineering
- (c) Surveying
- (d) Planning Law
- (e) Landscape Design

Master of Engineering (Public Health).—Any candidate who has passed the B.E. Degree Examination of the Calcutta University, or any other Engineering Examination accepted by the Syndicate as equivalent thereto, may be admitted to this examination, provided he has prosecuted the prescribed course of studies in an institution or institutions affiliated to the University for the purpose, for at least one academic year.

The examination shall consist of the following:—

Written Paper

- I . Sanitary Bacteriology, Biology and Chemistry.
- II .. Public Health Administration and Law, Epidemiology and Statistics.
- III . Public Health Engineering—I (Water Supply, Drainage and Sewage).
- IV . Public Health Engineering—II (Water Purification, Sewage and Refuse Disposal).
- V . Public Health Engineering—III (General Sanitation, Hospitals, Housing and Town Planning, Ventilation, Food Sanitation Control of Insect Enemies, etc.)
- VI . Public Health Engineering—IV (Design, Estimating and Construction of Public Health Engineering Works).
- VII .. Public Health Engineering—V (Malaria Engineering).
- VIII .. Public Health Engineering—VI (Industrial Hygiene Engineering and Industrial Wastes Disposal).
- IX .. Sessional and Practical work.
- X .. *Viva voce.* ..

MASTER OF ENGINEERING

Any Bachelor of Engineering or Metallurgy of Pass and Honours Course may be admitted to the M.E. Examination in any branch after prosecuting a regular course of study in an affiliated college for one year in the case of an Honours graduate and for two years in the case

of a Pass graduate. A candidate is examined in any of the following branches:—

- (i) Civil Engineering
- (ii) Electrical Engineering
- (iii) Mechanical Engineering
- (iv) Metallurgical Engineering

There are four theoretical papers under each branch of study and each candidate is required to submit a thesis on the subject.

DOCTOR OF PHILOSOPHY IN ENGINEERING

Any Bachelor of Engineering or Metallurgy or Architecture or Master of Engineering may be a candidate for the degree. He is required to work for two years under a teacher recognised by the University and to submit a thesis for the degree. The thesis is examined by a Board of Examiners and thereafter the candidate is to sit for an oral and/or practical examination.

Doctor of Science (Engineering).—Any Bachelor of Engineering of the University of Calcutta may offer himself as candidate for the Degree of Doctor of Science (Engineering) after he has practised his profession with repute for five years.

This is an examination by thesis which may be supplemented by an examination, written, practical, oral, or all.

Diploma in Town and Regional Planning.—The courses of study extend over two years after passing the B.E. Examination or one year after passing the B.Arch. Examination and are as follows:—

- (i) (a) History of Town Planning and Civic Design.
- (b) Sociology, Philosophy and Economics in relation to Town Planning.
- (ii) Town Planning Law.
- (iii) (a) Town Planning in relation to Engineering.
- (b) Town Planning in relation to Architecture, and Amenities and Landscape Planning.
- (iv) Statutory Planning in Practice (Theory).
- (v) Town Planning Practice (Theory).
- Town Planning Practice (Drawing).
- (vi) Town and City Planning and Regional Planning.
- (vii) Sessional Work—
 - (a) Studio Work.
 - (b) Planning Project and Thesis.
 - (c) Viva voce Test on Planning Project and Thesis.

* MILITARY STUDIES

Two grades of certificates will be issued for examination in Military studies: (i) Junior and (ii) Senior. No one who has not passed the Junior Certificate Examination at least two years previously shall be eligible for admission to the Senior Certificate Examination. Both the examinations are divided into two parts—each carrying 100 marks. The theoretical portion shall include: *for the Junior Examination*, (i) Military Hygiene and Camp Sanitation, (ii) Map Reading and Field Sketching, (iii) Discipline Leadership *esprit de corps*, morale and its importance in war, (iv) History of the Army in India, (v) Bandages and Symbols of Rank in the Fighting Forces, (vi) Theory of Small Arms Fire, (vii) Organization of an Infantry Battalion, and (viii) Elements of Field Craft; *for the Senior Course*, (i) General Knowledge of the Organization of the Army, Navy and Air Force (in India), (ii) Principles and Development of Tactics, Study of selected campaigns, (iii) Principles of Military Law (in India), (iv) Characteristics of Modern Weapons, (v) Indian Military Geography, (vi) Relationship between Civil and Military Administration and the responsibility of all citizens in an emergency, and (vii) Welfare and Psychology of Man-Management. Principles of Command. Credit of the marks obtained in excess of 60 is allowed to be added to the aggregate of the marks obtained by the candidates appearing at the I.A., I.Sc., B.A., B.Sc., B.Com., or B.E., examinations provided certain conditions are fulfilled

MUSIC

Bachelor of Music.—Any undergraduate in Music (I. Mus.) may be admitted to the examination after prosecuting a regular course of study for two years in a college. A candidate is examined in the following subjects: 4 papers in Music proper (Theoretical and Practical), 2 papers in languages and 2 papers in any one of the subjects indicated below:

(i) Kirttana, (ii) Rabindra Sangeet, (iii) Bengali songs other than Kirttana or Rabindra Sangeet, (iv) Folk Songs of Bengali or of Orissa.

In order to pass, a candidate must obtain 40 per cent of the marks in each of the Theoretical papers and 50 per cent of the marks in each of the Practical papers and 48 per cent in the aggregate.

Intermediate in Music.—Any Matriculate or School Final passed student, after prosecuting a regular course of study for two years in a college may appear at the examination. The examination shall consist of 6 papers under compulsory subjects and 4 papers under optional subjects including 2 papers for practical.

In order to pass, a candidate must obtain 40 per cent of the marks in each of the Theoretical papers and 60 per cent in each of the Practical papers and 48 per cent in the aggregate.

* Changes in these Regulations relating to Military Studies are awaiting sanction of Government.

SCALE OF FEES

				Rs.
Intermediate in Arts (a)	..	..	..	30 †
Bachelor of Arts (Pass) (b)	..	..	..	45
Bachelor of Arts (Hons.) (c)	..	..	..	55
Bachelor of Commerce	..	..	..	45
Master of Arts	..	..	..	80 *
Doctor of Philosophy (Arts or Science)	..	..	..	200
Doctor of Literature	..	..	..	300
Intermediate in Science (a)	..	..	..	30 †
Intermediate Examination (Science) in Agriculture	..	..	..	30
Bachelor of Science Pass (b)	..	..	..	45
Bachelor of Science (Hons.) (c)	..	..	..	55
Bachelor of Science (Technology) Part I	..	..	..	50
Bachelor of Science (Technology) Part II	..	..	..	50
Bachelor of Science Pass (Agriculture)	..	..	..	45
Bachelor of Science Pass (Hons.)	..	..	..	55
Master of Science	..	..	..	80 *
Master of Science (Technology) Part I	..	..	..	50
Master of Science (Technology) Part II..	..	..	..	75
Doctor of Science	..	..	..	300
Certificate in Applied Psychology	..	..	..	30

(a) Fee for appearing in *one subject only* under certain conditions—Rs. 15

(b) Fee for appearing in *one subject only* under certain conditions—Rs. 23

(c) Fee for appearing in *one subject only* under certain conditions—Rs. 28

Certificate in Tanning	..	..	..	50
Licentiate in Teaching	..	..	..	30
Bachelor of Teaching	..	..	..	40
Diploma in Librarianship	..	..	..	40
Certificate in Language	..	..	..	40
Diploma in Language	..	..	..	60
Diploma in Social Work (Labour Welfare)	..	..	..	60
Diploma in Spoken English	..	..	..	50
English Teachership Certificate Examination	..	..	..	10
Teachers' Training Certificate Examination (Art Appreciation)	..	..	..	10
Diploma in Domestic Science	..	..	..	30

† An additional fee of Re. 1/- for practical examination in case of a candidate appearing with a science subject.

* An additional fee of Rs. 10/- is charged in case of a candidate appearing in a science subject.

Bachelor of Laws—

				Rs.
Preliminary	..	..	..	30
Intermediate	..	..	..	30
Final	..	..	..	30
Master of Laws	..	..	..	200
Doctor of Laws	..	..	..	300

First M.B.B.S.—

Part I	..	..	..	15
Part II	..	..	..	35
Parts I & II	..	..	..	50

Final M.B.B.S.—

Part I	..	..	..	40
Part II	..	..	..	40
Parts I & II	..	..	..	80
Doctor of Medicine	..	..	..	300
Master of Surgery	..	..	..	300
Master of Obstetrics	..	..	..	300
Diploma in Tuberculous Diseases	..	..	..	50
Diploma in Child Health	..	..	..	100
Diploma in Dietetics	..	..	..	100
Diploma in Medical Radiology and Electrology, Part I	..	..	..	100
Diploma in Medical Radiology and Electrology, Part II	..	..	..	100
Diploma in Industrial Health, Part I	..	..	..	100
Diploma in Industrial Health, Part II	..	..	..	100
Diploma in Tropical Medicine and Hygiene	..	..	..	100

Bachelor of Dental Surgery—

First, Second and Third Professional Examination	..	..	(each)	30
Final Professional Examination	..	..	..	50
Intermediate Examination in Nursing	..	..	..	30
Bachelor of Nursing	..	..	..	45
Diploma in Soap Technology	..	..	..	100
Diploma in Journalism	..	..	..	60
Diploma in Public Health, Part I	..	..	..	100
Diploma in Public Health, Part II	..	..	..	100
Diploma in Ophthalmic Medicine and Surgery, Part I	..	..	..	100
Diploma in Ophthalmic Medicine and Surgery, Part II	..	..	..	100
Diploma in Maternity and Child Welfare	..	..	..	100
Diploma in Gynaecology and Obstetrics	..	..	..	100
Doctor of Science (Public Health)	..	..	..	300
Bachelor of Engineering, Part I	..	..	..	40
Bachelor of Engineering, Part II	..	..	..	50

				Rs.
Master of Engineering	..	..	..	80
Bachelor of Architecture, Part I	..	..	..	40
Bachelor of Architecture, Part II	..	..	..	50
Diploma in Town and Regional Planning	..	..	..	100
Master of Architecture	..	..	..	200
Doctor of Science (Engineering)	..	..	..	300
Master of Engineering (Public Health)	..	..	..	100
Master of Planning	..	..	..	200
Diploma in Nutrition, Part I	..	..	..	100
Diploma in Nutrition, Part II	..	..	..	100
Diploma in Anaesthesia, Part I	..	..	..	100
Diploma in Anaesthesia, Part II	..	..	..	100

CEYLON UNIVERSITY

OFFICERS AND AUTHORITIES

The Chancellor

His Excellency Sir Oliver Goonetilleke, G.C.M.G., K.C.V.O.,
K.B.E., B.A. (Lond.), Hon. LL.D. (Ceylon), Governor-General
of Ceylon

The Pro-Chancellor

The Hon. Mr. W. Dahanoyake, Minister of Education

The Vice-Chancellor

Sir Nicholas Attygalle, F.R.C.S. (Eng.), F.R.C.O.G.
(Gt Brit.), L.M.S. (Ceylon), Hon. D.Sc. (Ceylon)

Registrar

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Assistant Registrars

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B. C. Anghie, B.A. (Lond.)

W. A. Jayawardana, B.A., M.A. (Ceylon)

Bursar

D. Amarasinghe

Assistant Bursar

Norbert Alwis

The Librarian

S. C. Blok, B.A. (Lond.), F.L.A.

Assistant Librarians

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H. A. I. Goonetilleke, B.A. (Lond.), Dip. Lib. Sc. (Madras)

E. L. Samarasinghe, B.Sc. (Ceylon), M.S. Columbia (N.Y.)

The Director of Physical Education

G. Brant Little, B.Sc. (Notre-Dame)

University Medical Officers

H. P. A. Wijetunga, M.B.B.S. (Ceylon), D.T.M. & H. (Lond.)

D. B. V. Weerasinghe, M.B.B.S. (Ceylon)

Former Chancellors

The Late Sir Andrew Caldecott, G.C.M.G., C.B.E., M.A.
(Oxon.), Hon. LL.D. (Ceylon), Chancellor, 1942—44

Sir Henry Monck-Mason Moore, G.C.M.G., M.A. (Cantab.),
Hon. LL.D. (Ceylon), Chancellor, 1944—49

The Rt. Hon. The Lord Soulbury, G.C.M.G., G.C.V.O.,
O.B.E., M.C., M.A. (Oxon), Hon. LL.D. (Ceylon).
Hon. Fellow of University College, Oxford,
Chancellor, 1949—54

Former Pro-Chancellors

. C. W. W. Kannangara, Hon. LL.D. (Ceylon),
Pro-Chancellor, 1942—47

E. A. Nugawela, Pro-Chancellor, 1948—52

M. D. Banda, B A (Lond.), Pro-Chancellor, 1953-56

Former Vice-Chancellors

Sir Ivor Jennings, Q.C., M.A., LL.B., Litt.D. (Cantab.),
LL.D. (Lond.), Hon. LL.D. (Bristol & Southampton).
Hon. LL.D. (Ceylon), Master of Trinity Hall and
Hon. Fellow of St Catherine's College, Cambridge

Professor Emeriti

F. H. V. Gulasekharam, M.A. (Madras)

W. A. E. Karunaratne, C.M.G., O.B.E., M.D. (Med.),
M.D. (Path.), Hon. D.Sc. (Ceylon), F.R.C.P. (Lond.)

Sir Nicholas Attygalle, F.R.C.S. (Eng.), F.R.C.O.G.
(Gt. Brit.), D.L.O. (Lond.), L.M.S. (Ceylon),
Hon. D.Sc. (Ceylon)

*The Court**(a) Members Ex-officio :*

The Chancellor
The Pro-Chancellor
The Vice-Chancellor
The Members of the Council
The Deans of The Faculties
The Professors
The Heads of Departments

*(b) Other Members :**(i) Elected by the Faculties*

			Until
Dr. N. A. Jayawickrema (Oriental Studies)	..	..	1957
Mr. W. J. F. Labrory (Arts)	..	..	1957

Until

Dr. V. Appapillai (Science)	..	..	..	1957
Dr. R. Caldera (Medicine)	..	..	..	1957
Mr. J. C. V. Chinnappa (Engineering)	..	..	..	1957
Dr. L. A. P. Brito-Babaputte (Agriculture and Vet. Science)	..	..	..	1957

(ii) *Elected by Registered Graduates*

Until

Mr. A. B. Perera	..	..	..	1957
Mr. L. P. N. Perera	..	..	..	1957
Mr. K. M. P. Rajaratne	..	..	..	1957
Dr. C. E. S. Weeratunga	..	..	..	1959
Mr. C. J. T. Thamotheram	..	..	..	1959

(iii) *Elected by University Teachers*

Until

Dr. M. B. Ariyapala	..	..	..	1957
J. D. Dhirasekera	..	..	..	1957

(iv) *Elected by the Parliament of Ceylon*

(a) *House of Representatives:*

Six Members.

(b) *Senate:*

Until

Sir Phillip Rodrigo	..	..	..	1957
Mr. U. B. Wanninayake	..	..	..	1957

(v) *Elected by Institutions connected with Oriental Culture*

Ven. Pandit Hegoda Dhamminda Nayake Thero	..	..	..	1957
Mudaliyar K. W. De A. Wijesinghe	..	..	..	1957
Dr. G. C. Mendis	..	..	..	1957
Mr. S. Natesan	..	..	..	1957
Mr. S. Ambikaipakam	..	..	..	1957

(vi) *Elected by the Council of Legal Education*

Until

Mr. Justice H. N. G. Fernando	..	..	..	1957
Mr. N. K. Choksy, Q.C.	..	..	..	1960

(vii) *Elected by the Ceylon Medical Council*

Until

Dr. M. C. M. Kaleel	..	..	..	1960
Dr. D. L. J. Kahawita	..	..	..	1960

(viii) *Elected by Associations*

Until

Mr. S. H. Perinpanayagam (All-Ceylon Union of Teachers)	..	..	..	1957
Rev. Fr. Peter A. Pillai (Headmasters' Conference)	..	..	..	1957
Miss E. M. Roper (Association of Headmistresses)	..	..	..	1957
Dr. E. M. Wijerama (Ceylon Medical Association)	..	..	..	1958
Mr. K. H. de Krefser (Engineering Association)	..	..	..	1959

Mr. L. G. W. Starbuck (Engineering Association) ..	1959
Mr. S. Rajanayagam (Ceylon Association for the Advancement of Science)	1957
Mr. D. Seneviratne (Ceylon Veterinary Association) .	1958

THE COUNCIL

(a) Members *Ex-officio* :

Vice-Chancellor	
The Director of Education (S. F. de Silva) ..	
Professor O. H. de A. Wijesekera, Dean, Faculty of Oriental Studies	
Professor T. Nadaraja, Dean, Faculty of Arts ..	
Professor B. L. T. de Silva, Dean, Faculty of Science ..	
Professor O. E. R. Abhayaratne, Dean, Faculty of Medicine	
Professor E. O. E. Pereira, Dean, Faculty of Engineering.	
Professor C. A. McGaughey, Dean, Faculty of Agriculture and Veterinary Science	

(b) Other Members :

(i) *Appointed by the Chancellor*

Until

Mr. A. M. A. Azeez	1957
Mr. Dudley Senanayake .. .	1959
Mr. H. V. Perera, Q.C.	1957
Mr. A. E. Keuneman	1957
Mr. N. E. Weerasooriya, Q.C.	1959

(ii) *Elected by the Court*

Until

Dr. N. M. Perera	1959
Rev. Fr. Peter A. Pillai	1959

(iii) *Elected by the Senate*

Until

Professor P. B. Fernando	1957
Professor E. L. Fonseka	1960

(iv) *Elected by the Wardens of the Halls of Residence* *Until*

Miss K. Mathiapparanam	1959
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THE SENATE

(a) Members *Ex-officio* :

The Vice-Chancellor.	
The Dean of the Faculty of Oriental Studies (Professor O. H. de A. Wijesekera) .	

The Dean of the Faculty of Arts (Professor T. Nadaraja).	
The Dean of the Faculty of Science (Professor B.L.T. de Silva).	
The Dean of the Faculty of Medicine (Professor O. E. R. Abhayaratne).	
The Dean of the Faculty of Engineering (Professor E. O. E. Pereira).	
The Dean of the Faculty of Agriculture and Veterinary Science (Professor C. A. McGaughey).	
Professor P. C. C. deSilva.	Professor Milroy Paul.
Professor G. S. W. de Saram	Professor R. H. Paul.
Professor P. K. Chanmugam	Professor M. V. P. Peiris.
Muttunayagam.	Professor H. C. Ray.
Professor M. A. B. Britto-	Professor D. A. Ranasinghe.
Professor J. R. Blaze.	Professor S. Paranavitana
Professor E. L. Fonseka.	Professor C. J. Eliezer
Professor W. Fernando.	Mr. J. de Lanerolle.
Professor P. B. Fernando.	Dr. Miss V. Reich.
Professor A. W. Mailvaganam.	The Librarian
Professor G. H. Cooray.	Professor B. B. Das Gupta.
Professor A. Sinnatamby.	Dr. S. M. Yusuf
Professor K. Kanapathipillai.	Mr. G. D. Somasundram.
Professor D. E. Hettiaratchi.	Dr. R. Peiris.
Professor T. L. Green	Dr. A. C. E. Koch
Professor V. Sivalingam.	Miss K. Mathiaparanam.
Professor K. Kularatnam.	Professor H. A. Passe.
	Professor. S. B. Dissanayake.

(b) Other Members :

(i) <i>Elected by Teachers of the University</i>			<i>Until</i>
Dr. M. B. Ariyapala	..	.	1957
Dr. T. de S. Muthucumarana	..	..	1957
(ii) <i>Principals of Schools appointed by the Council</i>			<i>Until</i>
The Rev. Canon R. S. deSaram	.	..	1957
Miss M. E. Simon	..	..	1957
(iii) <i>Elected by the Council</i>			<i>Until</i>
Senator A. M. A. Azeez	..	..	1959
Rev. Fr. Peter A. Pillai	..	..	1957
(iv) <i>Appointed by the Council</i>			<i>Until</i>
Dr. M. F. Chandraratne	..	..	1960
(v) <i>Representatives of Oriental Culture</i>			<i>Until</i>
The Ven. Baddegama Piyaratana Maha Thero	..	..	1957
The Ven. Dr. P. Vajiranana Thero	..	..	1957
Mr. S. Natesan	..	..	1957

DEPARTMENTS OF STUDY

Faculty of Oriental Studies

Dean : Professor O. H. de A. Wijesekera

Arabic—

S. M. Yusuf, M.A., Ph.D. (Aligarh), Lecturer and Head of the Department.

Pali and Buddhist Civilisation—

G. P. Malalasekera, O.B.E., M.A., D.Litt. (Lond.), Professor and Head of the Department. (on leave)

4 Lecturers.

Sanskrit—

O. H. de A. Wijesekera, M.A., Ph.D., Dipl., O.S. (Lond.), Professor and Head of the Department.

3 Lecturers..

1 Assistant Lecturer.

Sinhalese—

D. E. Hettiaratchi, B.A., Ph.D. (Lond.), M.A., Ph.D. (Calcutta), Professor and Head of the Department.

6 Lecturers.

Tamil—

K. Kanapathipillai, B.A., Ph.D. (Lond.), Vidwan (Annamalai) Professor and Head of the Department.

3 Lecturers.

1 Assistant Lecturer.

FACULTY OF ARTS

Dean : Professor T. Nadaraja

Arabic—

(see Faculty of Oriental Studies).

Economics—

B. B. Das Gupta, M.A., Ph.D. (Calcutta), B.Sc. (Econ.), (Lond.) Professor and Head of the Department.

6 Lecturers.

2 Assistant Lecturers.

English—

H. A. Passe, B.A., Ph.D. (Lond.) Professor and Head of the Department.

3 Lecturers.

Geography—

K. Kularatnam, M.A., Ph.D. (Lond.), Doctorate de L'Universite (Sciences) Hons., (Paris), DIP. Gemmology, A.G.A. (Lond.), Dip. Geog. (Madras), M.A., Inst. Min. E., F.R.G.S., F.S.S., Professor & Head of the Department.

1 Lecturer.

2 Assistant Lecturers

History—

H. C. Ray, M.A. (Calcutta), Ph.D., Litt.D. (Lond.), F.A.S.B., Professor and Head of the Department.

7 Lecturers.

1 Assistant Lecturer (on Leave)

Archaeology—

S. Paranavitane, C.B.E., Ph.D. (Lond.), (Hon.), D.Litt. (Ceylon), Professor.

Law—

T. Nadaraja, M.A., (Cantab.), Barrister-at-Law and Advocate, Professor and Head of the Department.

2 Lecturers.

1 Assistant Lecturer.

Modern Languages (Western)—

Miss V. Reich, Ph.D. (Vienna), Lecturer, and Head of the Department.

Mathematics—

C. J. Eliezer, M.Sc., D.Sc. (Lond.), M.A., Ph.D. (Cantab.), Professor and Head of the Department.

S. Nadaraser, M.A. (Cantab.), B.Sc. (Lond.), Reader.

3 Lecturers.

3 Assistant Lecturers.

Pali and Buddhist Civilisation—

(see Faculty of Oriental Studies).

Sanskrit—

(see Faculty of Oriental Studies).

Sinhalese—

(see Faculty of Oriental Studies).

Philosophy—

Miss K. Mathiaparanam, M.A. (Madras), Lecturer and Acting Head of the Department.

3 Lecturers.

1 Assistant Lecturer.

Sociology—

P. R. Peiris, B.A. (Ceylon), B.Sc (Econ.), Ph.D. (Lond.), Lecturer and Head of the Department.

1 Lecturer.

1 Assistant Lecturer.

Tamil—

(see Faculty of Oriental Studies).

Western Classics—

C. W. Amerasinghe, B.A. (Lond.), M.A. (Cantab), Reader and Acting Head of the Department.

2 Lecturers.

FACULTY OF SCIENCE

Dean : Professor B. L. T. de Silva.

Anatomy—

(see Faculty of Medicine).

Botany—

B. L. T. de Silva, M.Sc. (Lond.), Ph.D. (Lond.), Professor and Head of the Department.

3 Lecturers.

2 Assistant Lecturers.

Chemistry—

E. L. Fonseka, M.Sc., Ph.D. (Lond.), F.R.I.C., Professor and Head of the Department.

6 Lecturers.

1 Assistant Lecturer.

Education—

J. E. Jayasuriya, M.A. (Lond.), Lecturer & Acting Head of the Department.

3 Lecturers.

3 Assistant Lecturers.

1 Instructor in Laboratory, Arts and Crafts.

Geography—

(see Faculty of Arts).

Mathematics—

(see Faculty of Arts).

Physics—

A. W. Mailvaganam, O.B.E., M.A., Ph.D. (Cantab.), B.Sc. (Lond.), F.R.A.S., F.N.A.S.C. (India), Professor and Head of the Department.

V. Appapillai, B.Sc., Ph.D. (Lond.), Reader.

6 Lecturers.

Physiology and Pharmacology—

(see Faculty of Medicine).

Zoology—

W. Fernando, B.Sc., Ph.D. (Lond.), Professor and Head of the Department.

3 Lecturers.

1 Assistant Lecturer.

FACULTY OF MEDICINE

Dean : Professor O. E. R. Abhayaratne

Anatomy—

P. K. Chanmugam, M.Sc. (Lond.), M.R.C.S. (Eng.), L.R.C.P. (Lond.), L.M.S. (Ceylon), Professor and Head of the Department.

4 Lecturers

4 Demonstrators.

Physiology—

A. C. E. Koch, B.Sc. (Oxon.) L.M.S. (Ceylon), Professor and Head of the Department.

N. G. Baptist, B.Sc., Ph.D. (Lond.), F.R.I.C. Reader.

9 Lecturers.

1 Assistant Lecturer.

2 Demonstrators.

1 Visiting Lecturer.

Pathology—

G. H. Cooray, O.B.E., M.D., B.S. (Lond.), M.R.C.S. (Eng.), L.R.C.P. (Lond.), D.T.M. & H. (Lond.), Professor and Head of the Department.

5 Lecturers.

2 Demonstrators.

1 Visiting Lecturer.

Bacteriology—

K. G. B. Stork, D.B. (Manch.), D.T.M. & H. (Eng.), L.M.S. (Ceylon), Visiting Lecturer.

1 Visiting Lecturer and Demonstrator.

1 Lecturer.

Parasitology—

V. Sivalingam, M.R.C.P. (Edin.), D.T.M. & H. (Eng.), L.R.C.P. & S. (Edin.), L.R.F.P. & S. (Glas.), L.M.S. (Ceylon), Professor and Head of the Department.

1 Visiting Lecturer.

1 Lecturer.

Forensic Medicine—

G. S. W. de Saram, O. B. E., M.B.B.S. (Lond.), M.R.C.S. (Eng.), L.R.C.P. (Lond.), L.M.S. (Ceylon), Professor and Head of the Department.

2 Lecturers.

Public Health—

O. E. R. Abharyaratne, D.P.H. (Harvard), M.P.H. (Cum Laude).
 Harvard, D.P.H. (Univ. Edin.), L.R.C.P. & S. (Edin.), L.R.F.P. &
 S (Glas.), L.M.S. (Ceylon), Professor and Head of the Department.
 2 Lecturers.

Medicine—

P. B. Fernando, O.B.E.M.D., F.R.C.P. (Lond.) D.T.M. & H.
 (Eng.) L.M.S. (Ceylon), Professor and Head of the Department.
 J. R. Blaze, O.B.E., M.D., F.R.C.P. (Lond.), L.M.S. (Ceylon),
 Associate Professor.
 P. C. C. deSilva, M.D., M.R.C.P. (Lond.), Professor of Pediatrics.
 2 Research Assistants.
 1 Lecturer.
 2 Registrars & 1 Fulbright Professor.

Ward Classes Tutorials, Clinical Medicine and Pre-Clinical Medicine—
 The Professors and 10 Visiting Lecturers.

Dermatology—

T. Chelvarajah, M.R.C.P. (Lond.), L.M.S. (Ceylon), Visiting
 Lecturer.

Tuberculosis—

J. R. Wilson, M.D., B.S. (Lond.), M.R.C.P. (Lond.), Visiting
 Lecturer.
 S. Nadarajah, L.M.S. (Ceylon), T.D.D. (Madras), Visiting Lecturer.
 A. M. D. Richards, L.M.S. (Cey.) T.D.D. (Madras), D.C.H.
 (St. Andrews), — Visiting Lecturer.

Leprosy—

P. J. de Fonseka, L.M.S. (Ceylon), Visiting Lecturer.

Infectious Diseases—

M. P. M. Cooray, M.R.C.S. (Eng.), L.R.C.P. (Lond.), Visiting
 Lecturer.

Psychological Medicine—

A. L. Abeywardena, L.M.S. (Ceylon), M.R.C.S. (Eng.) D.P.M.
 (Lond.), L.R.C.P., Visiting Lecturer.

Clinical Instructions O.P.D.—

R. S. Thanabalasundram, M.D., M.R.C.P. (Lond.), M.B.B.S.,
 (Ceylon), Visiting Lecturer.

Nutrition—

Professor of Public Health.

Surgery—

Miroy Paul, M.S. (Lond.), F.R.C.S. (Eng.), M.R.C.P. (Lond.),
 F.I.C.S., Professor and Head of the Department.
 M. V. P. Peiris, O.B.E., M.B.B.S., F.R.C.S. (Eng.), F.A.C.S.,
 F.I.C.S., L.M.S. (Ceylon), Associate Professor.
 C. P. de Fonseka, M.B.B.S. (Cey.) F.R.C.S. (Eng.) M.S. (Cey.).
 3 Research Assistants.

Ward Classes, Tutorials, Clinical Surgery, Pre-Clinical Surgery and Operative Surgery—

The Professors and 13 Visiting Lecturers.

Radiology and Electro-therapeutics—

J. J. Q. Peiris, D.M.R.D., D.M.R.T., R.C.P. (Lond.), R.C.S. (Eng.), Visiting Lecturer.

H. K. T. Fernando, D.M.R.D., D.M.R.T., R.C.P. (Lond.), R.C.S. (Eng.), L.R.F.P.O.S (Glas.), Visiting Lecturer.

D. D. A. Jayamane, L.M.S. (Cey). M.B.B.S. (Lond.), D.M.R. (Lond), Visiting Lecturer.

Anaesthetics—

C. M. H. Gunaratne, M.B.B.S. (Cey.), F.F.A.R.C.S. (Eng.). D.A. (Lond), D.A. (Dublin), Anaesthetist, Gen. Hospital, Visiting Lecturer.

S Ponnambalam, L.M.S. (Cey.), D.A. (Lond.), D A. (Ireland). F.F.A.R.C.S. (Eng.), Anaesthetist, General Hospital, Visiting Lecturer.

B S Perera, M.B.B.S. (Cey.), F.F.A.R.C.S. (Eng.), Anaesthetist, General Hospital, Visiting Lecturer.

L. M de Silva, L.R.C.P. & S. (Edin.), D.T.M. & H (Eng.), D.A. (Eng.), F.R.A.R.C.S. (Eng.), Visiting Lecturer.

A. Lucas, L.M.S. (Ceylon), L.R.C.P. & S. (Edin.), L.R.F.P. & S. (Glas.), F.F.A.R.C.S. (Eng.), D.A.R.C.P. & S (Eng.), D.T.M. & H. (Eng.) (Anaesthetist, General Hospital), Visiting Lecturer.

D. C. M. Umagiliya, L.M.S. (Ceylon), D.A.R.C.P. & S. (Lond.), (Anaesthetist, General Hospital), Visiting Lecturer.

J. L. C. Fernando, L.M.S. (Ceylon), D.A.R.C.P. & S. (Lond.), (Anaesthetist, General Hospital), Visiting Lecturer.

J. R. Richards, L.M.S. (Cey.), F.F.R.C.S. (Eng.), Anaesthetist, Lady Ridgway Hospital, Visiting Lecturer.

Dental Surgery—

W. Balendra, L.D.S., R.C.S. (Eng.), M.R.C.S. (Eng.), F.D.S. (Edin.), L.R.C.P. (Lond.), L.M.S. (Ceylon), Visiting Lecturer.

Venereal Diseases—

Mrs. E. D. C. Pereira, M.R.C.S. (Eng.), L.R.C.P. (Lond.), L.M.S. (Ceylon), Visiting Lecturer.

Otology, Laryngology, Rhinology—

R. C. J. Rustomjee, F.R.C.S. (Eng.), L.M.S. (Ceylon), Visiting Lecturer.

V. Rasanayagam, F.R.C.S. (Eng.), L.M.S. (Cey.), E.N.T. Surgeon, General Hospital, Visiting Lecturer.

Orthopaedics—

Francis Silva, F.R.C.S. (Eng.), L.M.S. (Ceylon), Visiting Lecturer.

Obstetrics and Gynaecology—

D. A. Ranasinghe, F.R.C.S. (Eng.), F.R.C.O.G. (Gt. Brit.), L.M.S. (Ceylon), Professor and Head of the Department.

A. Sinnatamby, F.R.C.S. (Eng.), F.R.C.S. (Edin.), F.R.C.O.G. (Gt. Brit.), L.M.S. (Ceylon), Professor.

2 Lecturers.

2 Research Assistants.

2 Tutors, 2 Visiting Obstetricians.

Ophthalmology :

T. R. Jausen, M.B.E., L.R.C.P. & S. (Edin.), L.R.F.P. & S. (Glas.), D.O.M.S., R.C.P.S. (Eng.), L.M.S. (Ceylon), Visiting Lecturer.

W. A. V. D. Ferdinando, L.M.S. (Cey.), M.R.C.S. (Eng.), L.R.C.P. (Lond.), D.O.M.S., R.C.P.S. (Eng.), Visiting Lecturer.

O. L. F. Senaratne, L.R.C.P. & S. (Eng.), L.R.F.P. & S. (Glas.), D.O.M.S., R.C.P. & S. (Lond.), Visiting Lecturer.

K. J. L. de S. Devaditiya, L.M.S. (Cey.), D.O.M.S. (Lond.), Visiting Lecturer.

K. Vythilingam, F.R.C.S. (Eng.), L.M.S. (Cey.), Visiting Lecturer.

P. Sivasubramaniam, F.R.C.S. (Eng.), L.M.S. (Ceylon), Eye Surgeon, V.M.E.H., Visiting Lecturer.

*Clinical Midwifery—**The Professors—*

R. Caldera, F.R.C.S. (Edin.), L.R.C.P. & S. (Edin.), L.R.F.P. & S. (Glas.), D.T.M. & H. (Eng.), L.M.S. (Ceylon).

P. D. Rajaratnam, M.S. (Liv.), F.R.C.S. (Eng.), F.R.C.O.G. (Gt. Brit.).

Dental Surgery—

S. B. Dissanayake, F.D.S., R.C.S. (Eng.), L.D.S., R.C.S. (Eng.), B.D.S. (Ceylon), Professor and Head of the Department.

2 Lecturers.

1 Visiting Lecturer.

1 Assistant Lecturer.

Prosthetic Dental Surgery—

M. A. B. Brito Muttunayagam, M.R.C.S. (Eng.), L.R.C.P. (Lond.), D.T.M., D.P.H. (Lond.), F.D.S., R.C.S. (Eng.), Professor and Head of the Department.

1 Assistant Lecturer.

Orthodontics—

The Professor of Dental Surgery.

Dental Radiology—

S. P. de Jong de Silva, L.M.S., L.D.S. (Ceylon), L.D.S.R.C.S. (Edin.), B.D.S. (Dunelm), F.D.S., R.C.S. (Eng.), Visiting Lecturer.

Operative Dental Surgery—

W. Balendra, L.D.S., R.C.S., M.R.C.S. (Eng.), L.R.C.P. (Lond.), L.M.S. (Ceylon), Visiting Lecturer.

F. A. L. Fernando, L.M.S., L.D.S. (Ceylon), L.D.S., R.C.S. (Eng.), H.D.D., R.C.S. (Edin.), Visiting Lecturer.

General Bacteriology—

J. Gulasekeram, D.B. (Lond.), D.T.M. & H. (Eng.), L.M.S. (Ceylon), Visiting Lecturer.

Dental Materials—

The Professor of Dental Prosthetics.

General Medicine—

H. Ivor Obeyesekera, M.B.B.S. (Ceylon), M.B.B.S. (Lond.) M.R.C.P. (Lond.), M.D. (Lond.).

General Surgery—

K. A. Jayasekera, L.M.S. (Ceylon), F.R.C.S. (Eng.).

Anaesthetics—

A. Lucas, L.M.S. (Ceylon), L.R.C.P. & S. (Edin.), L.R.F.P. & S. (Glas.), D.A., R.C.P. & S. (Eng.), D.T.M. & H. (Eng.), Visiting Lecturer.

General Anatomy—

M. J. Waas, Ph.D. (Manch.), L.M.S. (Cey.), Lecturer.

F. L. W. Jayawardene, M.B.B.S. (Ceylon), Ph.D. (Edin.), Lecturer.

Dental Anatomy and Histology—

P. K. Chanmugam, M.Sc. (Lond.), M.R.C.S. (Eng.), L.R.C.P. (Lond.), L.M.S. (Ceylon), Professor of Anatomy.

M. J. Waas, Ph.D. (Manch.), L.M.S. (Cey.), Lecturer.

Dental Pathology—

S. M. Dissanayake, F.D.S., R.C.S., L.D.S., R.C.S. (Eng.), B.D.S. (Ceylon), Professor of Dental Surgery.

Physiology and Pharmacology—

A. C. E. Koch, B.Sc. (Oxon.), L.M.S. (Ceylon), Professor and Head of the Department.

N. G. Baptist, B.Sc., Ph D. (Lond.), F.R.I.C., Reader in Bio-Chemistry.

8 Lecturers.

2 Demonstrators.

General Pathology—

G H. Cooray, O.B.E., M.D., B.S. (Lond.), M.R.C.S. (Eng.), L.R.C.P., D.T.M. & H. (Lond.), Professor of Pathology.

1 Lecturer.

FACULTY OF ENGINEERING

Dean: Professor E. O. E. Pereira

Civil Engineering—

E O. E. Pereira, B.Sc. (Lond.), B A. (Cantab.), A.M.I.C.E., Professor and Head of the Department.

5 Lecturers.

Electrical Engineering—

R. H. Paul, M A. (Cantab.), B.Sc. (Lond.), M.I.E.E., F.R.S.A., Assoc. I. Mech. E., Professor and Head of the Department.

2 Lecturers.

2 Assistant Lecturers.

Mechanical Engineering—

G. D. Somasunderam, B.Sc. (Gen.), B.Sc. (Spl.), B.Sc. (Eng.), (Lond.), A.C.G.I., A.M.I.E.E., A.M.I. Mech. E., Lecturer and Head of the Department.

1 Lecturer.

1 Assistant Lecturer.

Mathematics—

E. F. Bartholomeusz, B.Sc. (Lond.), Assistant Lecturer.

FACULTY OF AGRICULTURE AND VETERINARY SCIENCE

Dean: Professor C. A. McGaughey

Agriculture—

E. J. Livera, B.Sc. (Lond), B.Sc. (Agric.) (Lond.), Lecturer and Acting Head of the Department.

4 Lecturers.

6 Assistant Lecturers.

1 Visiting Lecturer.

Veterinary Science—

C. A. McGaughey, M.A., (Cantab.), M.Sc. (Manch.), M.R.C.V.S.,
D.V.S.M. (Manch.), Professor and Head of the Department.

5 Lecturers.

6 Visiting Lecturers.

1 Temp. Assistant Lecturer.

I. HISTORY

The University of Ceylon was established by the Ceylon University Ordinance (No. 20 of 1942) which was passed by the State Council on April 2nd, 1942, and received the Governor's assent on May 5th of that year. It was brought into operation on July 1st, 1942, by a Proclamation dated June 9th, 1952. The nucleus of the University was formed, however, by two Colleges of University rank, the Ceylon Medical College founded in 1870 and the Ceylon University College founded in 1921, both of which were incorporated into the University.

2. CONSTITUTION

The University Commission appointed by Government in 1928 had recommended that the University of Ceylon should be unitary, residential and autonomous. The Ceylon University Ordinance seeks to carry out this recommendation. The Ceylon University College and the Ceylon Medical College lost their identity on the 1st July, 1942, and were formed into a single University. They did not become constituent or affiliated Colleges; nor has the University power to admit Colleges to affiliation. New Faculties may be created, and other Colleges may be absorbed; but, if that is done, those Colleges also will lose their identity.

This unitary character of the University is reinforced by the provisions of the Ordinance relating to residence. It is provided that the seat of the University shall be in or near Kandy (section 4) and that every under-graduate shall reside within such radius from the Convocation Hall as shall be prescribed, in a Hall or under such conditions of residence as may be prescribed (section 1). These provisions cannot be brought into operation, however until the necessary buildings have been erected in the University Park at Peradeniya. They have accordingly been suspended by the Proclamation of June 12, 1942. When the building plans for Peradeniya Park have been carried out, there will be residential accommodation in the Halls for every (or nearly every) under-graduate in the Faculties of Oriental Studies, Arts, Science and Law. Though it is intended to retain the Medical School in Colombo, agreement has been reached with the Government for the establishment of a second Medical School, with a University Hospital, in Peradeniya. The Faculty of Medicine will then be divided into two Schools; but they will operate in parallel lines and staff and students will be interchangeable. It has also

been decided to establish Faculties of Agriculture, Veterinary Science, and Engineering. The last will be established on University land. The others will occupy the lands and buildings of the School of Agriculture and the Veterinary Hospital though additional buildings will be needed on the Golf Course. These additions to the original plan, together with the increased demand for University education, will require a considerable increase of residential accommodation and efforts are being made to find land to house a maximum of 4,000 students and some 250 academic staff.

The autonomy of the University was secured by making it a body corporate with the usual power to sue and be sued and to act under its common seal (section 3). It is not a Government Department like the former University College and Medical College: the members of its staff are not government servants: it is not controlled by a Minister; it has its own machinery for controlling its finances. Until sufficient endowments are received to enable it, with its other sources of income, to "live on its own" it will however be largely dependent upon an annual grant from the Parliament of Ceylon.

The corporation known as the University of Ceylon is made up of the Chancellor, the Pro-Chancellor, the Vice-Chancellor, the Court, the Council and the Senate (section 3). The Governor-General of Ceylon is Chancellor and the Minister of Education is Pro-Chancellor, *ex-officio* (sections 10 and 11). The Vice-Chancellor is a paid full-time executive and academic officer (section 12). Financial and Legislative control is vested in the Court, which consists, under section 15 and Statute II, of the Chancellor, the Pro-Chancellor, the Vice-Chancellor, the Members of the Council, the Professors and other Heads of Departments, representatives of the Faculties, graduates, Parliament and other bodies, and certain nominated members. Its main functions are to make Statutes and to adopt the estimates and accounts. The Council is the Executive body of the University and consists of the Vice-Chancellor, the Director of Education, the Deans of the Faculties, five members appointed by the Chancellor, three members elected by the Court, two members elected by the Senate and one Warden (but this last provision has been suspended). In academic matters, however, the Council acts on the advice of the Senate, which consists of the Vice-Chancellor, the Deans of the Faculties, the Professors and other Heads of Departments, the Librarian, two members elected by other teachers of the University, two schoolmasters appointed by the Council, two members appointed by the Council, one Warden, and not more than five other persons with special qualifications appointed by the Council. In many cases, however, the Senate acts on the recommendation of the Faculties. A Faculty consists of the Professors, readers and lecturers of the Departments within the Faculty together with persons appointed by the Council on the recommendation of the Senate, and *ex-officio* members.

The University exercises its legislative power by means of three types of delegated legislation ;

- (1) Statutes, which are made by the Court after consulting the Council. The first Statutes are scheduled to the Ordinance ;
- (2) Acts, which are made by the Council, in most cases on the proposition of the Senate ;
- (3) Regulations, which are usually made by the Council or the Senate.

5. ADMISSION TO THE UNIVERSITY

Admission to the University is controlled by a Board of Admission, consisting of the Vice-Chancellor, the Deans of the Faculties and such other officers or teachers of the University as the Council may determine. Applications for admission should be made to the Registrar. By the Ordinance, no person is eligible for admission to a course of study for a degree unless he has attained the age of seventeen years, and unless he has passed an Entrance Examination of the University or an Examination recognised by the Senate for that purpose.

The University has two Entrance Examinations, the Preliminary Examination and the First Examination for Medical Degrees. The latter examination may be taken by candidates from approved schools, who, if successful, may enter the Faculty of Medicine direct.

The Preliminary Examination is an examination in four subjects and an Essay in English, Sinhalese or Tamil. The subjects shall be selected from a group in the manner prescribed.

A candidate intending to read for the First Examination for Medical Degrees cannot present himself for the Entrance Examination unless he has passed a preliminary examination in general education recognised by the General Medical Council of Great Britain.

6. ADMISSION OF STUDENTS FROM OTHER UNIVERSITIES

A student who has been in attendance at another University or at a College of University status shall not be admitted to the University of Ceylon unless the Vice-Chancellor is satisfied, from certificates from the University or University College or from other evidence, that the student's work in that University has been satisfactory and his conduct good.

The University of Ceylon accepts the rule of Indian Universities requiring migration certificates.

The following exemptions may be granted to students of other Universities :—

- (1) Exemption may be granted from the Preliminary Examination where the student has taken an examination which is recognised by the Senate as equivalent.
- (2) Where the Faculty of Oriental Studies of the Faculty of Arts or the Faculty of Science reports that a student has followed a course of study of at least one session's duration at a University College and has passed an examination of a standard not lower than that of the First Examination in Arts, or the First Examination in Science, the Senate may in any special case authorise the admission of that student and exempt him from one year's study and from the First Examination in Arts or from the First Examination in Science.
- (3) Where the Senate after consideration of a report from a Faculty, decides that a graduate of another University is competent to proceed to a first degree in that Faculty after a course of study of two sessions' duration, he may be admitted to the University of Ceylon without an examination and may be exempted from the First Examination in that Faculty and from one session's course of study.
- (4) Where the Faculty of Science reports that a student has followed a course of study in a University or University College of at least one session's duration and has passed an examination of a standard not lower than that of the First Examination for Medical degrees, the Senate may in a special case, admit the student to the Faculty of Medicine and exempt him from the First Examination for Medical degrees.
- (5) Where the Faculty of Medicine reports that a student who has passed the First Examination for Medical degrees, or has been exempted from it, has followed a course of study in Anatomy and Physiology of at least six terms' duration at a University or Medical School whose degrees or diplomas are recognised by the General Medical Council, and has passed an examination whose standard is not lower than that of the Second Examination for Medical degrees, the Senate may in special cases exempt the student from two years of study in the Faculty of Medicine and from the Second Examination for Medical degrees.

7. COURSES OF STUDY

First Degrees

General.—The University has at present six professional schools, for Medicine, Dental Surgery, Law, Engineering, Agriculture and Veterinary Science. In these schools, the scheme of studies is determined primarily by professional needs and in the Faculty of Medicine in particular it has

to follow the general lines of the recommendations of the *General Medical Council* of the United Kingdom. The Scheme of studies in the Faculties of Arts and Science are determined primarily by educational requirements.

Degree of Bachelor of Arts or Bachelor of Science

The Degree of Bachelor of Arts or Science is neither an "Honours" nor a "Pass" Degree because these nomenclatures are unknown in this University. Honours are awarded both on the General Course and on the Special Course. The General Course is recommended for those who wish to have a broad education in three related subjects and the Special Course for those who wish to have a more intensive, but narrower, course in one subject: a student is not admitted to a Special Course, unless—

- (a) he has reached "advanced standard" at the Entrance Examination,
- (b) he has shown special competence in the subject at the General Qualifying Examination.

At any stage of the Special Course, however, a student may be required to transfer himself to the General Course.

General Course

The course is of three years' duration and there is an examination at the end of each year namely—

- 1st year—General Qualifying Examination—Arts or Science
- 2nd year—General Examination Part I—Arts or Science.
- 3rd year—General Examination Part II—Arts or Science.

Parts I and II are considered together for the award of Honours.

Special Course

Unless a student has been exempted from the General Qualifying Examination because he has attained "advanced standard" at the Entrance Examination he must follow the course for the General Qualifying Examination and then be approved for a Special Course on the results of that examination. The Special Course is of three years' duration with an examination at the end of each year, namely—

- 1st year—Special Qualifying Examination—Arts or Science.
- 2nd year—Special Examination Part I—Arts or Science.
- 3rd year—Special Examination Part II—Arts or Science.

General Course for Degrees in Arts

The following is the Course for the General Course, but in each case at least two subjects must be selected from (a) list:—

Group I—

- (a) Arabic, Persian, Pali, Sanskrit, Sinhalese, Tamil.
- (b) Buddhist Civilization, English, French, German, Latin, Greek, History, Philosophy.

Group II—

- (a) English, French, German, Latin, Greek.
- (b) Arabic, Persian, Pali, Sanskrit, Sinhalese, Tamil, Economics, Geography, History, Philosophy.

Group III—

- (a) Economics, Geography, History, Philosophy.
- (b) Arabic, Persian, Pali, Sanskrit, Sinhalese, Tamil, English, French, German, Latin, Greek.

Group IV—

- (a) Economics, Geography, Mathematics, Philosophy.
- (b) Arabic, Persian, Pali, Sanskrit, Sinhalese, Tamil, English, French, German, Latin, Greek.

Group V—

- (a) Arabic, Persian, Sinhalese, Tamil, English, French, German.
- (b) Economics, Geography, History, Philosophy.

Special Courses in Arts

Special Courses may be provided in the following subjects:—

Arabic, Pali, Sanskrit, Sinhalese, Tamil, Economics, English, Geography, History, Mathematics, Philosophy, Sociology, Latin, Greek, Western Classics.

General Course for Science Degrees

Candidates for the General Science Examination shall have followed the appropriate courses from the following, selecting three subjects:—

Pure Mathematics, Applied Mathematics, Physics, Chemistry, Botany, Zoology, Geography.

Special Courses for Science Degrees

Candidates for the Special Course in Science will select a subject from:—

Mathematics, Physics, Chemistry, Botany, Zoology, Geography.

For the subsidiary subject (if any) prescribed for the Special Courses candidates will select one from any of the subjects listed for the General Course.

In the Special Science Examination questions will be set involving the translation of passages from French and/or German and answers with regard to the subject matter thereof.

Degree of Bachelor of Laws (LL.B.)

A course of study for the Degree of Bachelor of Laws shall be of three years' duration. A degree is granted to a candidate who has passed the First Examination at the end of one year's study and the Final Examination two years after.

First Examination.—will be on the following subjects—Roman Law, Constitutional Law, Legal Systems of Ceylon and Criminal Law.

Final Examination.—will be on the following subjects—Law of Persons and Property, Laws of Contract and Delict, Jurisprudence and Legal Theory, Commercial Law or Evidence and Procedure or Individual Law or Conflict of Laws.

A candidate successful at the Final Examination may be awarded First Class Honours, Second Class Honours or a Pass.

Degree of Bachelor of the Science of Agriculture
(B.Sc. Agric.)

The course will be three years' duration and the prescribed examinations shall be:—

1. First Examination in Agriculture at the end of the 1st year: subjects—Chemistry, Botany and Zoology.
2. Final Examination in Agriculture, Part I, at the end of the 2nd year: subjects—Agriculture, Animal Husbandry and Hygiene, Agricultural Chemistry, Agricultural Zoology and Agricultural Botany.
3. Final Examination in Agriculture, Part II, at the end of the 3rd year: subjects—General Agriculture, Agricultural Botany, Agricultural Chemistry, Agricultural Zoology and Animal Husbandry and Hygiene.

A candidate who has passed both parts of the final examination will be awarded First Class Honours, Second Class Honours or a Pass.

Degree of Bachelor of the Science of Engineering
(B.Sc. Eng.)

The course will be of three years' duration and the prescribed examinations shall be:—

1. First Examination in Engineering at the end of the 1st year: subjects—Mathematics, Physics, Chemistry.
2. Final Examination in Engineering, Part I at the end of the 2nd year.
3. Final Examination in Engineering, Part II at the end of the 3rd year.

The subjects for the Final Examination shall be those prescribed by Regulations made by the Senate after consulting the Faculty of Engineering.

A candidate who has passed both parts of the Final Examination may be awarded First Class Honours, Second Class Honours or a Pass.

Degree of Bachelor of Veterinary Science (B.V.Sc.)

The course will be of four years' duration and the prescribed examinations shall be:—

1. First Examination in Veterinary Science at the end of the 1st year: subjects—Physics, Chemistry, Biology.
2. Second Examination in Veterinary Science at the end of the 2nd year: subjects—Veterinary Anatomy, Veterinary Physiology, Veterinary Histology and Embryology.
3. Third Examination in Veterinary Science at the end of the 3rd year: subjects—Animal Management, Veterinary Pathology and Bacteriology and Veterinary Parasitology.
4. Final Examination in Veterinary Science at the end of the 4th year: subjects—Veterinary Medicine, Veterinary Surgery and Animal Husbandry.

A candidate who passes the Second Examination or the Third Examination or the Final Examination at one and the same examination may be awarded First Class or Second Class Honours or a Pass provided that normally it is his first attempt at each examination.

Degree of B.Sc. Anatomy and Physiology

A candidate may be admitted to a course of study for this degree if he has passed the First and Second Examinations for Medical degrees. The course of study is of two years' duration. The subjects for the Final Examination are:—(a) Physics, Chemistry, Zoology; (b) Anatomy, Physiology; at least two subjects must be selected from (a).

The regulations in respect of the award of First Class Honours and Second Class Honours are the same as those that apply to the Bachelor of Arts and Bachelor of Science degree.

Degree of Bachelor of Medicine and Bachelor of Surgery.

First Examination for Medical Degrees

For admission to a course of studies for Medical degrees a candidate must pass the First Examination for Medical degrees. A candidate may be permitted to sit at the First Examination for Medical degrees if he has passed a preliminary examination in general education recognised by the General Medical Council of the United Kingdom and has followed the approved course. The subjects for the First Examination shall be Physics, Chemistry and Biology and the candidate must satisfy the examiners in these subjects at one and the same examination; provided that a candidate who has satisfied the examiners in two of these subjects may, on the recommendation of the Board of Examiners, be permitted to present himself for examination in the third subject and if he then satisfies the examiners in that subject, he shall be deemed to have passed the First Examination.

Second Examination for Medical Degrees

The subjects for the Second Examination shall be Anatomy and Physiology and the candidates must satisfy the examiners in these subjects

at one and the same examination: provided that a candidate, who has satisfied the examiners in one of these subjects may, at the discretion of the Senate exercised on a recommendation of the Board of Examiners, be permitted to present himself for examination in the other subject at a subsequent examination and, if he then satisfies the examiners in that subject he shall be deemed to have passed Second Examination.

A candidate for the Second Examination must complete the prescribed course.

Third Examination for Medical Degrees

A student may be a candidate for the Third Examination if he has passed the Second Examination and since passing the Second Examination has followed the prescribed courses.

The Third Examination shall be in three parts:—

Part I—Pharmacology;

Part II—Pathology and Bacteriology and

Part III—Public Health and Parasitology and Forensic Medicine.

A candidate may present himself for each part separately and must pass the whole part at one and the same examination:

Provided that a candidate for Part III who has satisfied the examiners in either Public Health and Parasitology or Forensic Medicine may at the discretion of the Senate, exercised on the recommendation of the Board of Examiners, be permitted to present himself for examination in the other subjects on a subsequent occasion and if he then satisfies the examiners in that subject he shall be deemed to have passed Part III.

Final Examination for Medical Degrees

A student may be a candidate for the Final Examination if

- (a) he has passed the Second Examination;
- (b) he has passed all Parts of the Third Examination;
- (c) he has been registered as a medical student for not less than five years;
- (d) has completed the prescribed courses; and
- (e) has attained the age of 21 years.

The subjects of the Final Examination shall be:—

- (a) Medicine,
- (b) Surgery, and
- (c) Obstetrics and Gynaecology.

A candidate shall enter all three subjects at one and the same examination; but if he satisfies the examiners in one or two subjects he may, at the discretion of the Senate exercised on the recommendation of the

Board of Examiners, be permitted to enter for the other subject or subjects at a subsequent examination or at subsequent examinations.

A candidate who passes the Final Examination at one and the same examination may be awarded First Class or Second Class Honours or a Pass :

Provided that:—

- (1) A candidate shall not be awarded a First Class or Second Class Honours except at his first attempt at the Examination.
- (2) Unless the Senate resolves for some specified reason before the date of the examination that the candidate may be regarded as a candidate for Honours, he shall not be awarded First Class Honours or Second Class Honours except at the first Final Examination after the termination of his course of study for the Examination.

Degrees and Diplomas in Dental Surgery

The University confers the Degree of Bachelor of Dental Surgery (B.D.S.) and the Diploma of Licentiate in Dental Surgery (L.D.S.) A student may be admitted to the Degree of Bachelor of Dental Surgery if he has attained the degree standard in the First, Second, Third and Final Examinations in Dental Surgery. In any other case he may be awarded the diploma of Licentiate in Dental Surgery.

First Examination in Dental Surgery

A candidate may be admitted to the First Examination if he has passed a preliminary examination in general education recognised by the General Medical Council of Great Britain and if he has followed an approved course.

A candidate may be exempted from the First Examination if he has passed the First Examination for Medical degrees or where the Faculty of Science reports that a student has followed a course of study in a University or University College of at least one session's duration and has thereafter passed an examination of a standard not lower than that of the First Examination for Medical degrees or of the First Examination, the Senate may in a special case admit the student as a dental student, with exemption from the First Examination. The subjects of the First Examination shall be Physics, Chemistry and Biology and the candidate must satisfy the examiners in these subjects at one and the same examination.

Provided that a candidate who has satisfied the examiners in two of these subjects may, on the recommendation of the Board of Examiners, be permitted to present himself for examination in the third subject and if he then satisfies the examiners in that subject, he shall be deemed to have passed the First Examination.

Second Examination in Dental Surgery

The course for the Second Examination shall be of six terms duration.
The subjects shall be :—

Part I—

- (a) Dental Metallurgy.
- (b) General Anatomy.
- (c) General Physiology.

Part II—

- (a) Dental Mechanics.
- (b) Dental Anatomy and Dental Physiology.
- (c) General Pathology and General Bacteriology.

(1) A candidate may enter for Part I at the end of the first year of study and shall not proceed to study for Part II unless either he has passed in Part I or been referred in one subject in that part.

(2) A candidate shall enter for the whole of each part at one and the same examination but may be referred in any subject in either part. A candidate shall not be deemed to be of degree standard unless he passes the whole of a part at the degree standard at one and the same examination.

(3) A candidate who has passed the Second Examination for Medical degrees shall be exempted from Part I if he passes in Dental Metallurgy and shall be deemed to be of degree standard if he attains the degree standard in that subject.

Third Examination in Dental Surgery

Admission to the examination is permitted to those who have passed or been exempted from the Second Examination and thereafter has followed the prescribed course.

The subjects of the Third Examination shall be :—

- (a) General Pharmacology.
- (b) General Medicine.
- (c) General Surgery.

A candidate for the Third Examination shall enter for all subjects at one and the same examination, but may be referred in one subject, provided that a candidate shall not be deemed to have reached degree standard unless he passes in all subjects at the same examination.

Final Examination in Dental Surgery

A dental student may be a candidate for the Final Examination if—

- (a) he has passed the Third Examination, and

- (b) since passing the Second Examination he has followed the prescribed course for six terms, and
- (c) he has attained the age of 21 years.

The subjects for the Final Examination shall be:—Dental Surgery (including Oral Surgery) and Pathology (including Operative Dental Surgery, Orthodontics, Anaesthetics, Radiology and Prosthetics).

A candidate shall enter for both parts at one and the same examination and shall not be deemed to be of degree standard unless he passes in both parts at one and the same examination; but if he satisfies the examiners in one part he may be a candidate for the other part, on a subsequent occasion.

A candidate who attains the degree standard at the First, Second, Third and Final Examinations may be awarded First Class or Second class Honours or a Pass:

Provided that:—

- (1) A candidate shall not be awarded First Class or Second Class Honours except at his first attempt at the Final Examination, and
- (2) Unless the Senate resolves for some specified reason before the date of the Examination that the candidate may be regarded as a candidate for Honours, he shall not be awarded First Class or Second Class Honours, if he has been registered as a dental student for more than four years.

Higher Degrees

The University provides a full course of instruction in post-graduates work leading to the following degrees:—

1. Master of Arts, M.A.
2. Master of Science, M.Sc.
3. Master of Laws, LL.M.
4. Master of the Science of Agriculture, M.S. (Agric.).
5. Master of the Science of Engineering, M.Sc. (Eng.).
6. Master of Surgery, M.S.
7. Master of Obstetrics & Gynaecology, M.O.G.
8. Doctor of Medicine, M.D. Pathology.
M.D. Physiology.
M.D. General Medicine.

Regulations governing the above courses are available

The following degrees may be conferred under the relevant Regulations:—

1. Doctor of Philosophy, Ph.D.
2. Doctor of Letters, D.Litt.

3. Doctor of Science, D.Sc.
4. Doctor of Laws, LL.D.

8. SCHOLARSHIPS, EXHIBITIONS AND BURSARIES

Owing to its limited endowments, the University makes available from its General Fund every year a substantial sum for the assistance of students by way of Scholarships, Exhibitions and Bursaries. Nearly 17 per cent of the students are receiving financial assistance in this way. Scholarships and Exhibitions are awarded only to students who attain a high standard in University Examinations. Bursaries are awarded to deserving students in need of financial assistance. The nominal value of a Scholarship is Rs. 100, and an Exhibition Rs. 50, but the emolument may be increased by the Scholarships Board, on proof of need up to the following maxima :—

				Rs.
Faculty of Arts	.	..	..	400
Faculty of Science	..	..	.	400
Faculty of Medicine	..	..	..	750

Since 1944 a separate Medical Scholarships Fund has been established at the request of the Minister for Health and is fed annually by a sum voted by the State Council.

Bursaries are awarded to those students entering the University who though not of Scholarship or Exhibitions standard show promise of a successful University career and who would not be able to enter the University without assistance.

Endowed Scholarships, Prizes and Medals

The University has at present a few endowments for the award of Scholarships, Prizes and Medals. No Scholarship, Prize or Medal is awarded by the Senate unless it is of opinion, after considering the report of the appropriate Board of Examiners that a candidate of sufficient merit has presented himself.

Research Scholarships

Two research scholarships may be awarded by the Senate in each year on the recommendation of the Board of Examiners in each of the Faculties of Oriental Studies, Arts and Science. A research scholarship shall be of the normal value of Rs. 600 and shall be awarded for one year but may be renewed by the Scholarships Board for one year.

Halls of Residence and Hostels

On the 6th October 1952 the Faculties of Oriental Studies and Arts moved into residence at Peradeniya. The Halls of Residence at Peradeniya are :—

Men—

1. Arunachalam Hall, Warden, Professor D. E. Hettiaratchi, B.A., Ph.D. (Lond.), M.A., Ph.D. (Cal.).
2. Jayatilaka Hall, Warden, Professor M. A. B. Brito Muttunayagam, M.R.C.S. (Eng.), L.R.C.P. (Lond.), D.T.M., D.P.H. (Lond.), F.D.S., R.C.S. (Eng.)
3. Marrs Hall, Warden, Professor O.H. de A. Wijesekera, M.A., Ph.D. (Lond.).
4. Ramanathan Hall, Warden, T. C. A. Corea, M.A. (Oxford).

Women—

5. Hilday Obeyesekera Hall, Warden, Miss K. Mathiaparanam, M.A. (Madras).
6. Sanghamitta Hall, Warden, Dr. (Mrs) Ram Aluvihare
7. James Peiris Hall, Warden, Mrs. V. Cooke, B.A. (Lond.), M.A. (Cantab.).

In Colombo four Hostels are attached to the University—

1. University Christian Hostel—Warden—Professor C. J. Eliezer, M.Sc., D.Sc. (Lond.), M.A., Ph.D. (Cantab.).
2. Aquinas Hall—Catholic Hostel.
3. Medical Halls of Residence—Warden—Dr. T. W. Wikramanayaka, M.B.B.S. (Ceylon), Ph.D. (Glas.).

Number of Students in the University on June 1, 1956.

Faculties of Arts and Oriental Studies	.. 1,037
Faculties of Science, Engineering and Medicine	.. 1,497

University Student Associations

Student activity is now centred both in Peradeniya and Colombo—

Activities at Peradeniya.—Peradeniya Union Society.

Activities in Colombo.—Science Students' Union, Medical Students' Union and Engineering Students' Union and the University Amalgamated Club, Colombo, which controls the Games Activities of all Colombo students.

There are various other Societies to meet the needs of special interests, Academic, Social, Political, Cultural and Religious.

DELHI UNIVERSITY

INTRODUCTORY : CHARACTER OF THE UNIVERSITY

The University of Delhi owes its existence to the report submitted by a Commission of educational experts presided over by Sir Michael E. Sadler, appointed to report on the utility of, and to suggest improvements in the constitution of the University of Calcutta. Though this Committee was nominally appointed only with reference to the needs and requirements of the Calcutta University, it was anticipated that its report would have a far-reaching effect, in that its recommendations might be adopted by the other Universities of India which were all cast in the same mould as the Calcutta University. The Sadler Commission recommended that the Calcutta University, and the other Universities of India instituted on the model of the London University as purely federal and examining bodies, should be re-organised and that the Universities in India should, in future, be of a unitary and residential type.

Following this recommendation, the University of the Punjab commenced to consider reshaping its character and as the Delhi Colleges were then affiliated to that University the Government of India felt the necessity of providing an independent University for the students of its Capital City. The Delhi University Act (Act VIII of 1922) was the result.

It was brought into force from 1st May, 1922, by a notification published in the *Gazette of India* dated 10th March, 1922. The Governor-General of India in exercise of the powers conferred on him by the Transitory Provisions of the Act appointed Dr. (Sir) Hari Singh Gaur, Kt., M.A., D.Litt., D.C.L., LL.D., M.L.A., Barrister-at-Law, of Nagpur, as the First Vice-Chancellor of the newly constituted University and issued a notification appointing a provisional Executive Council.

The provisional Executive Council met frequently in the months of May and June, and completed the temporary organization of the University. The Vice-Chancellor prepared draft Ordinances and Regulations which were laid before it and in parts passed after amendment. The rest were considered to be of no immediate urgency and were left to be dealt with by the respective permanent bodies concerned.

Three men's Colleges in Delhi were first recognised as Colleges of the University, viz., St. Stephen's College, Hindu College and Ramjas College, their teaching staffs were accorded recognition in accordance with the terms of the Government of India Notification as teachers of the University. The Faculties of Arts and Science were instituted. Readers were appointed and on 12th June, 1922, an Academic Council was formed.

This Academic Council met constantly during term-time throughout the year. In order to secure adequate deliberation on its own projected

courses and regulations, it adopted provisionally those in force in the University of the Punjab which body also kindly undertook to conduct the examination of Delhi University students for the year 1923.

By the middle of February 1923, the Court was constituted. By the end of March, the permanent Executive Council was formed. Thus by the end of summer of 1923, the University was fully organised. In May, 1924, the Faculty of Law was instituted. The Faculty of Medicine was instituted in 1944.

The original idea of the Delhi University was the establishment and incorporation of a unitary teaching and residential University at Delhi. It was intended to provide for a local University on the model recommended, in the case of Dacca, by the Calcutta University Commission. But the University of Delhi, could not be developed with a purely unitary University inasmuch as it recognised several constituent colleges in which instruction was provided under conditions prescribed in the Statutes and in which provision was made for the residence of students. Although it had been freed from the inevitable defects of a purely affiliating institution, yet at the same time it had given its constituent colleges ample scope to develop their resources in co-operation with each other and with the University itself. Since 1933, when the University was housed in the Old Viceregal Lodge, and plots of land in the Estate were earmarked for the constituent colleges, the idea of a federal University had gradually taken shape, and it was the intention of the Government of India and of the authorities of the University, that the University should be transformed into one of the federal type, in which each constituent college should be prepared to forego some measure of its autonomy in order to share in and contribute to the life and government of the University as a whole.

To implement this an amendment of Act VIII of 1922 by Act No. XXIV of 1943, was passed by the Central Legislature which received the assent of the Governor-General on 10th September, 1943. The amending Act *inter alia* provided for an alternative procedure for the appointment of the Vice-Chancellor, the revision of the Constitution of the Committee of Selection concerned with the appointment and recognition of Teachers and the institution of a three-year degree course in Arts and Science. The extension of the degree course from two to three years was a part of the scheme of reconstruction of the Higher Secondary Education in Delhi which had been expected by the University as well as by the Government of India. The scheme included *inter alia* three fundamental principles, namely, (1) the abolition of the Intermediate Examination, (2) the Extension of the High School Course by one year (that is, extension of the School Course from 10 to 11 years), (3) the institution of a three-year course in the University.

The Delhi University Act has been further amended by Act No. V of 1952 which received the assent of the President on 23rd February, 1952.

The University of Delhi has now been made a "teaching and affiliating University." The University would have "Constituent Colleges and Affiliated Colleges".

'Affiliated College' means an institution recognised by the University in accordance with the provisions of this Act and the Statutes in which instruction is provided in accordance with the provisions of the Statutes and Ordinances up to Bachelor's degree but exclusive of Honours and Post-graduate degrees.

'Constituent College' means an institution recognised as such by the Executive Council in accordance with the provisions of this Act and the Statutes.

The new Act has also made organisational changes; some of which are on the lines of the recommendations of the Universities Commission. The constitution and the powers of the principal authorities, viz., the Court, the Executive Council and the Academic Council have been changed. The Finance Committee has been added as an authority of the University. The President who was the Chancellor under the old Act will be the Visitor of the University and the important powers of the Chancellor are vested in him. There will be a Chief Rector. The Chancellor will be elected by the Court of the University. The new Constitution has avoided the system of election of members and substituted the principle of seniority by rotation to the membership of the principal authorities.

Teachers employed by the College are 'recognised' by the University.

A recognised teacher can impart instruction only in such subjects as the Executive Council of the University on the recommendation of the Selection Committee permits. All recognised teaching in connection with the courses of study is conducted under the control of the University. The courses of study and the courses of reading are prescribed by Ordinances and Regulations, respectively.

The jurisdiction of the University is restricted to the Delhi State.

The following are the Colleges of the University:—

Colleges—

1. St. Stephen's College, University Enclave, Delhi.
2. Hindu College, University Enclave, Delhi.
3. Ramjas College, University Enclave, Delhi.
4. Delhi College, Ajmeri Gate, Delhi-6.
5. Shri Ram College of Commerce, University Enclave, Delhi.
6. Indraprastha College for Women, Alipore Road, Delhi-8.
7. Miranda House, Chhatra Marg, Delhi-9.
8. College of Nursing, Jaswant Singh Road, New Delhi-2.
9. Central Institute of Education, Chhatra Marg, Delhi-9.
10. Hans Raj College, University Enclave, Delhi.
11. Central College of Agriculture, Indian Agricultural Research Institute, Pusa, New Delhi-5

12. Kirori Mal College, University Enclave, Delhi.
13. Lady Hardinge Medical College, New Delhi-2.
14. Shri Guru Teg Bahadur Khalsa College, Karol Bagh, New Delhi.
15. Deshbandhu College, Kalkaji, Delhi.
16. Delhi School of Economics, Chhatar Marg, Delhi-9.
17. Delhi School of Social Work, Vish Vidyalaya Marg, Delhi-8.
18. Lady Irwin College, Sikandra Road, New Delhi.
19. Delhi Polytechnic, Kashmere Gate, Delhi.
20. Indian School of International Studies, Barakhamba Road, New Delhi.

OFFICERS AND STAFF OF THE UNIVERSITY

Visitor

The President, Republic of India

Chancellor

Dr. S. Radhakrishnan, M.A., D.Litt., LL.D., F.B.A.,
Vice-President of India

Pro-Chancellor

Shri Sudhi Ranjan Das, Chief Justice of India

Vice-Chancellor

Dr. V. K. R. V. Rao, M.A., Ph.D., D.Litt.

Treasurer

Shri M. S. Bhatnagar, Joint Secretary, Government of India,
Ministry of Finance, New Delhi

Registrar

Shri T. P. S. Iyer, M.A.

Dean of the Faculty of Arts

Dr. N. V. Banerjee, M.A., Ph.D.

Dean of the Faculty of Science

Dr. P. Maheshwari, M.Sc., D.Sc., F.N.I., F.A.Sc.

Dean of the Faculty of Law

Shri L. R. Sivasubramanian, B.A., M.L.

Dean of the Faculty of Medicine

Dr. R. Viswanathan, B.A., M.D., M.R.C.P. (Lond.),
T.D.D. (Wales), F.C.C.P. (Amer.)

Dean of the Faculty of Education

Dr. E. A. Pires, M.A., Ph.D., T.D.

Dean of the Faculty of Agriculture and Forestry

Dr. E. S. Narayanan, Principal, Central College of
Agriculture, I.A.R I., Delhi

Dean of the Faculty of Social Sciences

Dr. B. N. Ganguli, M.A., Ph.D., P.R.S.

Dean of the Faculty of Technology

Shri S. C. Sen, B.Sc. (Eng.)

Proctor

Dr. Bisheshwar Prasad, M.A., D.Litt.

Librarian

Shri S. Das Gupta, M.A. (Delhi), B.A. (Cantab.)

The following is the teaching staff of the University appointed and paid by the University :

FACULTY OF ARTS

1. Dr. Ram Behari, M.A., Ph.D., Sc.D., Professor of Mathematics.
 2. Dr. Bisheshwar Prasad, M.A., Ph.D., D.Litt., Professor of History.
 3. Dr. N. V. Banerjee, M.A., Ph.D., Professor of Philosophy.
 4. Dr. P. Saran, M.A., Ph.D., Reader in History.
 5. Dr. Nagendra Nagaich, M.A., D.Litt., Professor of Hindi.
 6. Dr. C. J. Chacko, M.A., Ph.D., Professor of Political Science.
 7. K. A. Fariq, M.A., Ph.D., Reader in Arabic and Persian.
 8. Dr. N. N. Chaudhuri, M.A., Reader in Sanskrit.
 9. Dr. Khwaja Ahmed Faruqi, M.A., Ph.D., Reader in Urdu.
 10. Dr. R. S. Mishra, M.Sc., Ph.D., Reader in Mathematics.
- Four Lecturers including one Part-time.

FACULTY OF SOCIAL SCIENCES

1. Dr. V. K. R. V. Rao, M.A., Ph.D., D.Litt., Professor of Economics.
 2. Dr. B. N. Ganguli, M.A., Ph.D., Professor in International Trade.
- Three Lecturers.

FACULTY OF SCIENCE

Physics—

1. Dr. D. S. Kothari, M.Sc., Ph.D., Professor of Physics.
2. Dr. R. C. Majumdar, D.Sc., Professor of Physics.
3. Dr. P. K. Kichlu, D.Sc., F.N.I., Professor of Physics.
4. Dr. F. C. Auluk, M.A., D.Sc., Professor of Physics.
5. Dr. N. K. Saha, M.Sc., D.Sc., Reader in Physics.

6. Dr. R. N. Rai, M.Sc., D.Phil., Reader in Physics.
 7. Dr. Ajit Ram Verma, M.Sc., Ph.D., Reader in Physics.
- Twenty-two Lecturers and three Research Assistants.

Chemistry—

1. Dr. T. R. Seshadri, M.Sc., Ph.D., Professor of Chemistry.
 2. Dr. R. P. Mitra, D.Sc., Professor of Chemistry.
 3. Dr. B. D. Jain, M.Sc., Ph.D., Reader in Chemistry.
 4. Dr. K. B. L. Mathur, D.Sc., A.R.I.C., Reader in Chemistry.
 5. Dr. G. S. Saharia, M.Sc., Ph.D., Reader in Chemistry.
- Twenty-two Lecturers and six Research Assistants.

Zoology—

1. Dr. M. L. Bhatia, Ph.D., D.Sc., Reader in Zoology.
 2. Dr. L. N. Johri, D.Sc., Reader in Zoology.
- Twelve Lecturers and one Research Assistant.

Botany—

1. Dr. P. Maheshwari, D.Sc., F.A.Sc., F.N.I., Professor of Botany.
 2. Dr. J. J. Chinoy, M.Sc., Ph.D., D.I.C., Reader in Botany.
 3. Dr. B. M. Johri, M.Sc., D.Sc., Reader in Botany.
- Eleven Lecturers and four Research Assistants.

Anthropology—

1. Dr. P. C. Biswas, M.Sc. (Cal.), Ph.D. (Berlin), Reader in Anthropology.
- Four Lecturers.

FACULTY OF LAW

1. Prof. L. R. Sivasubramanian, M.L., Professor of Law.
 2. Dr. M. P. Jain, LL.M., J.S.D., Reader in Law.
 3. Shri Sudarshan Dhar, B.A., LL.M., Reader in Law.
 4. Dr. (Miss) Latika Mitra, B.A., LL.B., Ph.D.
- Twenty-six Lecturers (including 10 Part-time and two Research Assistants).

RUSSIAN DEPARTMENT

1. Shri V. Shibayev, Reader in Russian.
- One Lecturer and two Tutorial Assistants.

LIBRARY SCIENCE

1. Shri S. Das Gupta, M.A., B.A. (Cantab.).
- Two Part-time Lecturers.

DEPARTMENT OF AFRICAN STUDIES

1. Shri P. S. Wright, M.A.—Organiser.
2. Dr. P. K. Sircar, M.Sc., Ph.D., Reader in African Studies and Geography.

3. Dr. S. N. Verma, M.A., Ph.D., Reader in Political Science.
4. Dr. Amba Prasad, M.A., Ph.D., Reader in History and Culture.
One Lecturer.

CONSTITUTION OF THE UNIVERSITY

The constitution of the University is defined by the Act and the Statutes. The Vice-Chancellor is the principal executive and academic officer of the University.

The following are the authorities of the University :—

1. The Court.
2. The Executive Council.
3. The Academic Council.
4. The Finance Committee.
5. The Faculties of Arts, Science, Law, Medical Sciences. Agriculture and Forestry, Education, Social Sciences and Technology.

The constitution and the terms of office of the members of the Court, the Executive Council, the Academic Council, the Faculties and the Finance Committee are prescribed by Statutes.

The Court consists of about 100 members. The Court is the supreme authority of the University and has the power to review the acts of the Executive Council and the Academic Council (save when these authorities have acted in accordance with the powers conferred upon them under this Act, the Statutes or the Ordinances) and can exercise all the powers of the University not otherwise provided for by this Act or the Statutes.

Its powers are :—

- (a) To make, amend or repeal the Statutes.
- (b) To approve any draft submitted by the Executive Council, and pass the Statutes or reject it or return it to the Executive Council for reconsideration either in whole or in part, together with any amendments which it may suggest.

The Executive Council is the executive body of the University. It consists of about 18 members and exercises among others the following powers :—

- (1) To have, subject to the control of the Court, the management and administration of the revenue, finances, accounts, investments, property and business of the University and the conduct of all administrative affairs of the University not otherwise provided for.
- (2) The institution of professorships, lectureships and other teaching posts as may be proposed by the Academic Council.
- (3) The appointment and recognition of teachers on the recommendation of the Selection Committee.

- (4) The appointment of all examiners after considering the recommendation of the Academic Council.

The Academic Council which consists of about 45 members is the academic body of the University and subject to the provisions of the Act, the Statutes and the Ordinances, has the control and general regulation of, and is responsible for the maintenance of, standards of instruction, education and examination within the University. It advises the Executive Council on all academic matters.

Each Faculty, subject to the control of the Academic Council, has charge of the teaching and the courses of study and the research work in such subjects as may be assigned to it by the Ordinances.

Each Faculty constitutes Committees of Courses and Studies in such subjects as are assigned to it. The Committees make recommendations for—

1. The courses of study, curricula and syllabuses.
2. The appointment of examiners.

APPROXIMATE NUMBER OF STUDENTS IN THE UNIVERSITY

	1952	1953	1954	1955
Qualifying ..	—	1,483	1,486	1,823
Pre-Medical ..	532	601	675	787
B.A. (Pass) & B.Sc. (Pass) ..	2,599	2,650	3,343	2,885
B.A. (Hons.) & B.Sc. (Hons.) ..	1,643	1,565	1,013	1,975
B.Com. ..	585	674	727	748
M.A. ..	610	705	736	888
M.Sc. ..	144	156	147	166
Law ..	911	893	841	960
M.B.B.S. ..	227	255	221	252
B.Ed. ..	68	70	78	114
Russian ..	101	50	67	83
Lib. Science ..	17	3/13	3/18	—
D.T.D. ..	15	14	15	15
M.Com. ..	20	35	43	47
M.Ed. ..	17	25	19	19
Ph.D. ..	136	187	237	308
Technology ..	199	288	520	544
French ..	58	82	35	79
B.Sc. Home Science ..	—	130	145	166
B.Sc. Hons (Nursing) ..	—	70	80	91
B.Sc. (Agri.) ..	—	117	119	137
Diploma in Statistics and Economic Administration ..	..	14/90	36	94

NUMBER OF SUCCESFUL CANDIDATES IN THE UNIVERSITY
EXAMINATIONS HELD IN APRIL AND MAY 1955

(The figures comprise of regular, ex-students and
private candidates)

<i>Examinations.</i>	<i>Number appeared.</i>	<i>Number passed.</i>	<i>Pass Per- centage.</i>
1. Qualifying ..	1,491	708	47.5%
2. Pre-Medical ..	387	254	65.6%
3. B.A. (Pass) ..	924	446	48.2%
4. B.Sc. (Pass) O.C. ..	30	37	46.2%
5. B.Sc. (Pass) N. C. ..	148	96	64.8%
6. B.A. (Hons.) English ..	41	29 (4)	70.7%
7. Do. Mathematics ..	68	33 (13)	48.5%
8. Do. Economics ..	118	90 + 1 (18)	77.1%
9. Do. History ..	66	49 (11)	74.2%
10. Do. Philosophy ..	10	10	100%
11. Do. Sanskrit ..	15	14	93.3%
12. Do. Hindi ..	47	36 (5)	76.5%
13. Do. Panjabi ..	3	3	100%
14. Do. Pol. Sc. ..	23	16 (5)	69.5%
Total of B.A. (Honours) ..	391	281 + 1 (56)	72.1%
15. B Com. ..	307	199 (10)	64.8%
16. B.Com. ..	..	(10)	..
17. B.Sc. (Honours) Mathematics ..	33	23 (2)	69.6%
18. Do. Physics ..	54	49 (1)	90.7%
19. Do. Chemistry ..	48	37 + 1 (2)	79.2%
20. Do. Botany ..	15	13 + 1	93.3%
21. Do. Zoology ..	24	13 (3)	54.2%
Total of B.Sc. (Honours) ..	174	135 + 2 (8)	78.7%

<i>Examinations.</i>		<i>Number appeared.</i>	<i>Number passed.</i>	<i>Pass Percentage.</i>
22.	M.A. (Final) English ..	52	35	66.1%
23.	Do. Mathematics ..	65	40	61.5%
24.	Do. Economics ..	81	63	77.7%
25.	Do. History ..	42	40	95.2%
26.	Do. Philosophy ..	21	21	100%
27.	Do. Sanskrit ..	18	15	83.3%
28.	Do. Hindi ..	48	39	81.2%
29.	Do. Urdu ..	2	2	100%
30.	Do. Panjabi ..	2	1	50%
31.	Do. Social Work ..	14	10	71.4%
32.	Do. Political Science ..	33	30	90.9%
33.	(M.Com..) Commerce ..	15	9	60%
Total of M.A. & M.Com. ..		394	305	77.4%
34.	M.Sc. (Final) Physics ..	23	23	100%
35.	Do. Chemistry ..	20	20	100%
36.	Do. Botany ..	10	10	100%
37.	Do. Zoology ..	10	10	100%
38.	Do. Anthropology ..	10	10	100%
Total of M.Sc. Final ..		73	73	100%
39.	LL.B. (Final) ..	322	245	76.1%
40.	Proficiency in Law ..	176	154	87.5%
41.	B.C.L. Part III N.C. ..	1	1	100%
42.	LL.M. Part II N.C. ..	8	..	.
43.	LL.M. Part II O.C. ..	2	..	.
44.	B.Sc. (Honours) Agri. III Yr. ..	28	25	89.2%
45.	B.Sc. (Honours) Nursing IV Yr. ..	15	13	86.6%
46.	B.Sc. (Home Sc.) III Yr. ..	45	34	75.5%
47.	M.B.B.S. Final Professional ..	21	17	80.9%
48.	B.Ed. ..	81	61	75.3%
49.	M.Ed. ..	22	18	81.8%

<i>Examinations.</i>	<i>Number appeared.</i>	<i>Number passed.</i>	<i>Pass Per- centage.</i>
50. Dip in Library Science .	18	17	94.4%
51. Master in Library Science ..	3	3	100%
52. Dip. in Econ. Statistics ..	13	13	100%
53. Dip in Econ. Administration ..	16	11	68.7%
54. Certificate in German ..	42	36	85.7%
55. Certificate in Italian ..	2	1	50%
56. Certificate in French ..	35	24	68.5%
57. Certificate of Proficiency in Russian.	12	11	91.6%
58. Diploma in Russian ..	3	2	66.6%
59. D T D ..	17	13	76.4%
60. B Ch E (Final) Examination	5	4	80%
61. B Arch. Final Examination ..	5	3	60%
62. B.E. (Elec.) Part II Examination ..	42	41	97.6%
63. B E (Mech.) Part II Examination.	23	22	95.5%
64. B.Text. Part II Examination .	28	20	71.4%
65. B.Ch.E. Part II Examination ..	8	3	37.5%
66. B.Arch. Part II Examination ..	4	4	100%
Grand Total .	5.066	3,330 + 3 (84)	65.8%

Note.—The number of candidates who appeared at the examination for Honours Degree but were granted Pass Degrees is shown separately within brackets.

SCHOLARSHIPS, MEDALS AND PRIZES

The Executive Council which has the authority to fix the number of senior and other scholarships have established under the All-India Scheme the following Scholarships and Fellowships :—

- (a) (i) Six entrance scholarships of the value of Rs. 100 p.m. each instituted under the All-India Scheme, awarded annually on the result of a competitive examination, to be held at various centres, throughout India.
- (ii) Six post-graduate scholarships of Rs. 100 p.m. and three Research Fellowships of Rs. 175 p.m. instituted under All-India Scheme, to be awarded on the recommendations of Selection Committee.

(b) In addition to the above All-India Scholarships the University awards a number of other scholarships to Hons. and post-graduate students. They are:—

- (a) One Senior Scholarship in History of the value of Rs. 100 p.m. for two years for the encouragement of research or original work in History.
- (b) One Senior Scholarship in Economics of the value of Rs. 100 p.m. tenable for one year but renewable for a second year on the recommendation of the Head of the Department and the Dean of the Faculty concerned.
- (c) One Kikabhai Premchand Senior Scholarship in Economics of the value of Rs. 100 per mensem for two years for the encouragement of original research work in Economics.
- (d) Six University entrance scholarships of the value of Rs. 25 p.m. tenable for three years in the Hons. classes in the University.
- (e) Four University scholarships of the value of Rs. 30 p.m. tenable for two years in the M.A. classes on the result of B.A. Hons. examination in order of merit.
- (f) Four University scholarships of the value of Rs. 30 p.m. tenable for two years in the M.Sc. classes on the result of B.Sc. Hons. examination in order of merit.
- (g) Three scholarships of the value of Rs. 30 p.m. in the Faculty of Law tenable for one year:—
 - (i) One on the result of the B.A. Hons. tenable in the Previous class.
 - (ii) One on the result of the Previous examination in Law tenable in the LL.B. class.
 - (iii) One on the result of LL.B. Final examination tenable in the LL.M. class.

ENDOWED SCHOLARSHIPS

1. As a result of the abolition of the Intermediate Course the Puran Chand Khatri Scholarships which used to be awarded to students who had passed the Matriculation or equivalent examination, and the Intermediate Examination have been turned into Sizarships. Two Sizarships are awarded for one year to the best Hindu Khatri students studying in the first year of the three-year degree course after having passed either the Higher Secondary Examination, Delhi, or the Qualifying Examination conducted by the University. The selection is made on the percentage of marks obtained by the candidates. The value of the Sizarships depends on the actual amount of income produced by the Endowment Fund.

2. Rai Bahadur Brijmohanlal Suddhi Memorial Scholarship of the value of Rs. 25 per mensem awarded for two years to the best student studying Physics for the M.Sc. degree.

MEDALS

1. M. Makhan Lal Gold Medal is awarded annually to the best Hindu woman student who passes a Degree examination of the University obtaining a First Class or Distinction.

2. M. Bhola Nath Gold Medal is awarded annually to the best candidate in the B.A. Examination of the University.

3. L. Jogeshwar Nath Goela Medal is awarded annually to the best candidate in Technical Education.

(Provided that so long as the University does not provide for Technical Education, the Medal shall be awarded to the best candidate in Law.)

4. Rai Bahadur Brijmohanlal Saheb Memorial Gold Medal is awarded annually to the candidate who passes the B.A. (Hons.) or B.Sc. (Hons.) Examination of the University in the first division with the highest percentage of marks.

5. Pt. Raghubar Dayal Memorial Medal is awarded to the best successful student in Sanskrit of the University, i.e., to the candidate who stands highest in the first division in the M.A. Examination in Sanskrit, or, in case there is no such candidate, in the B.A. (Hons.) Examination of the University, provided that he is placed in the first division of the Examination.

PRIZES

The Hiralal Bhargava Prize: to be awarded to the best Bhargava student who passed a Degree Examination of the University obtaining a first class or distinction. The order of preference shall be as follows:—

1. M.A. or M.Sc.
2. B.A. Honours or B.Sc. Honours.
3. B.A. (Pass) or B.Sc. (Pass).

The place of the candidate shall be determined for the purpose, by the percentage of marks obtained.

Provided that the Prize shall not be awarded to the same student twice. In case the best candidate happens to have won the Prize once, it shall be awarded to the next best student—

The Ravi Kanta Devi Prize: to be awarded to the best woman candidate in the B.A. Honours Examination provided she is placed in the first division.

The Ranade Prize: to be awarded to a student who has passed the **B.A. Honours Examination in Economics**, obtaining a first division and standing first in order of merit.

Baboo Piyare Lal Memorial Prize: to be awarded to the best LL.M. candidate in the first class or in the absence of such a candidate to the best among the candidates who got first class in **M.A. Examination in Economics**.

The Central Government Prize for B.Ed: to be awarded to the best candidate who passed the **B.Ed. Examination**.

The Central Government Prize for M.Ed.: to be awarded to the best candidate who passed the **M.Ed. Examination**.

Kumari Rajeshwari Razdan Memorial Prize: to be awarded to the candidate who stands first in order of merit in the **M.Sc. Examination**.

The Jai Narayan Vaish Prize for B.Com.: to be awarded to the best candidate who passed the **B.Com. Examination** with highest percentage of marks obtaining a first class.

The Jai Narayan Prize for M. Com: to be awarded to the best candidate who passed the **M.Com. Examination** with the highest percentage of marks obtaining a first class.

The Rector's Prize for General Knowledge and Ability: The Prize of the value of Rs. 150 in the form of books, instruments or apparatus selected by the winner, to be awarded on the result of a Competitive Examination open to all under-graduate members of the University, to the student who secures the highest marks in the examination.

The Political Science Essay Prize: The Prize to be awarded each year to the author of the best essay on the subject selected by the Committee of Courses for Political Science. All members of the University who are graduates and are *in statu pupillary* at the time of notification shall be eligible to compete.

The Sir C. P. Ramaswamy Aiyer English Essay Prize: the Prize to be awarded each year to the author of the best essay in English on a subject determined by the Vice-Chancellor. Students who have not exceeded five years after the date of their first entry into the University shall be eligible to compete.

The Leela Bengali Essay Prize: The Prize of the value of Rs. 100 to be awarded each year to the author of the best essay in Bengali on a subject determined by the Vice-Chancellor. Students reading in the Post-Graduate classes of the University and graduates of not more than five years' standing shall be eligible to compete.

The Narsing Das Prize for Bengali: The Prize of the value of Rs. 1,000 to reward and encourage the writing of Bengali books and theses in Arts

and Science to be awarded alternately to Arts and Science subjects, to the writer whose published production is considered to be the best during the year of award. In the absence of a suitable candidate in any year, the award may be changed from Science to Arts and *vice versa*.

L. Banarsidass Charity Trust Prize : The Prize of the value of Rs. 100 in the form of books to be awarded to the student who secures the highest percentage of marks in the M.Sc. Examination, provided he has been placed in the first division.

The Central Government Prize for Agriculture : The Prize of the value of Rs. 100 in the form of books to be awarded to the candidate who secures the highest percentage of marks in the B.Sc. (Hons.) Agriculture Examination obtaining a first division.

The Central Government Prize for Agriculture : The Prize of the value of Rs. 100 in the form of books to be awarded to the candidate who secures the highest percentage of marks in "Agriculture". For the purpose of this award, the position shall be determined by the aggregate of marks obtained in "Agriculture" in the I, II and III Year Examination.

LIBRARY, MUSEUMS, LABORATORIES

Library--

The University Library has been reclassified according to Colon System of Classification which the University has accepted. The total number of volumes in the Library as on 31st March, 1955 was 61,591 books and 12,364 bound periodicals. The total number of new accessions during the period April 1954—March 1955 was 6,940 books and 517 bound periodicals.

Laboratories—

There is ample scope for Laboratory training to a large number of Honours and Post-graduate students in Physics, Chemistry, Botany and Zoology. The Department of Anthropology is housed in the Arts Faculty Building.

PROVISION FOR RESEARCH

In order to encourage students to obtain a research degree in Arts, Science the degree of Doctor of Philosophy (Ph.D.) was instituted in 1944.

Similar provision exists for obtaining a research degree in Law, Education, Medical Sciences, and Technology.

Subject to the general guidance of the Academic Council Post-graduate and Research studies in the University are organised by Boards of Research Studies—one each for the Humanities, for Sciences, for Law and for the Medical Sciences.

MILITARY TRAINING

The 1st Delhi Bn., U.O.T.C. has, since July, 1948, been transformed into the National Cadet Corps (N.C.C.) (senior) but the number of students that can receive military training is the same as before, *i.e.*, 4 companies with a normal authorised strength as given below :—

Senior Div. Officers 13—Cadets 590.

Junior Div. Officers 27—Cadets 1,022.

ASSOCIATIONS IN THE UNIVERSITY

A University Athletic Association has been formed to develop and conduct games, athletics and adequate sports in the University. It also conducts the University Tournaments open to Colleges. There is a Sports Officer appointed by the University in charge of the Athletic Association. Besides, the Constituent Colleges have a number of Societies, Clubs and Unions for social and intellectual intercourse.

RESIDENCE

The University has two Halls for the residence of post-graduate men students within the University area.

Gwyer Hall

The Gwyer Hall has 108 rooms and provides for the residence of 108 residents. Besides these, there are 15 bigger rooms for the residence of research students and teachers. The Hall has a well-furnished Common Room, and a spacious Dining Hall. The management is vested in the Provost.

Jubilee Hall

The building consists of 59 single rooms each 16 ft. \times 16 ft. which form part of the military barracks within the University area. There are 68 resident students.

The Master of the Hall is responsible for discipline.

Residence for students is also provided by the different Constituent Colleges in the boarding houses attached to the respective Colleges.

UNIVERSITY UNION

The Delhi University Union was inaugurated by Pandit Jawaharlal Nehru, Prime Minister of India, on the 9th April, 1949.

MEDICAL FACILITIES

Under the auspices of the World Universities Service, the University has a dispensary and a whole-time Medical Officer. The building of the hospital is under construction.

PROVIDENT FUND

Every employee of the University holding a substantive appointment and receiving a salary of Rs. 30 per mensem or more is required to join the University Provident Fund as a subscriber. Subscription to the Provident Fund are deducted monthly from the pay bill of each subscriber at the rate of 8 per cent of his monthly pay. The University makes on behalf of each subscriber a monthly contribution to the fund at the rate of 12 per cent of the pay for those employed before 1944, 8 per cent for those employed before 1952 and 6½ per cent thereafter.

The income and expenditure for the year 1954-55 as compared with the preceding year is as follows:—

	<i>Income</i>	<i>Expenditure</i>
1953-54	Rs. 24,25,104	Rs. 25,97,704
1954-55	Rs. 27,50,230	Rs. 27,69,406

The following statement shows income and expenditure on various accounts during the year under report:—

<i>Income</i>		<i>Expenditure</i>	
	Rs.		Rs.
Government Grant ..	19,36,528	Salaries of Teaching staff including D.A. ..	7,84,165
Fees from Students ..	3,46,938	Salaries of Administrative staff including D.A. ..	6,08,325
Examination Fees ..	2,73,992	Furniture Equipment and Apparatus ..	1,99,042
Miscellaneous and Special receipts ..	1,21,181	Scholarship ..	70,810
Rents ..	66,591	Library—	
		(a) Books ..	46,641
		(b) Periodicals ..	25,185
		(c) Other Contingent expenditure ..	19,702
		Conduct of Examinations.	2,71,622
		* Other Expenditure ..	7,43,914
Total ..	<u>27,50,230</u>	Total ..	<u>27,69,406</u>

A detailed statement of income and expenditure under the various heads of accounts is given in statement attached in the Appendix.

The grants received during the year were as under:—

	Rs.
Recurring (Block Grant)	11,60,000
V. P. Chest Institute including D T.D.	
Course	1,40,000
Repayment of Loans	77,558
Department of Political Science	20,498
Department of Hindi	9,378
Department of African Studies	19,900
Three Subjects Science Course	80,110
Stamp duty for Rs 11,00,000	17,330
Dearness Allowance, Botanical Gardens,	
Zoological Museum, etc.	26,000
School of Economics	19,682
Revision of Salary scales of Teachers	57,920
Deficit Grant for 1952-53	90,102
Five-Year Development Grant	2,18,000
Total	19,36,520

The following instalments of grants were received during the year towards Capital outlay and other specific expenditure:—

	Rs
V.P. Chest Institute	2,00,000
W.U.S. Health Centre	10,000
Department of African Studies	1,00,000
Miranda House	1,00,000
Library Books (Science)	1,00,000
Library Books (Humanities)	30,000
Development of Science Deptt.	2,57,500

The expenditure out of the Capital account on Building works and other items during the year amounted to Rs. 16,41,109. Some of the important items of expenditure are given below:—

	Rs.
Science Labs. Buildings	1,98,809
Arts Faculty (4th Wing)	1,96,564
Miranda House	94,214
Library Books (Science)	1,00,000
Library Books (Humanities)	30,000
Post-graduate Research Teaching—	
Department of Physics	75,571
Department of Chemistry	25,717
Department of Botany	11,369
Department of Zoology	2,154
Department of Anthropology	4,898

Development of Science Departments—	Rs.
Physics ..	30,783
Chemistry ..	17,888
Botany ..	19,387
Zoology ..	16,106

ADMISSION TO THE UNIVERSITY

The stage of admission to the University has been a difficult problem for a long time as the present standard of the Matriculation or the High School Examination is not sufficiently high for direct admission to the three-year degree course of the University. The Board of Higher Secondary Education in Delhi has, by improving the High Schools and by extending the School Course by one year, (i.e., from 10 to 11 years) instituted the Higher Secondary School Examination which has been recognised by the University as a Qualifying Test for admission to a three-year degree course.

A student must be at least 16 years of age before the 1st October of the year in which he seeks admission to the University.

The last day of admission every year is ordinarily 20th July. Late admissions may be made till 31st July at the discretion of the Principal concerned and till the 10th August with the approval of the Vice-Chancellor.

THE PREPARATORY COURSE AND THE QUALIFYING EXAMINATION

The University has, as a temporary measure, authorised the Colleges of the University to admit students who have passed a Matriculation Examination of an Indian University or an examination recognised as equivalent thereto to a preparatory course of one year leading to a Qualifying Examination for admission to the University. The University conducts in the month of April every year a Qualifying Examination for admission to the University.

After the introduction of the three-year degree course, the Intermediate Examination in Arts and Science has been abolished. However, for students who desire to qualify for admission to a medical college provision has been made in some colleges for a Pre-Medical course.

For students desiring to qualify for the Engineering Course, provision for a Pre-Engineering Course has been made in the Delhi Polytechnic.

ADMISSION EXAMINATION

Provision has also been made for those students who have to migrate to this University after passing the first year of an Intermediate course to get admission to the first year of the three-year degree course provided they pass an Admission Examination conducted by this University. The

Academic Council may also permit students to be exempted from the first year of the three-year degree course if they (the students) wish to join this University after passing the Intermediate Examination.

WOMEN'S EDUCATION

There are five women's Colleges, the Indraprastha College for Women, Lady Hardinge Medical College, Lady Irwin College, College of Nursing and the University-maintained College for women called "Miranda House". Owing, however, to the special conditions of Purdah obtaining in Delhi, provision has been made for permitting women students to appear in the examinations of the University without undergoing a regular course of study in a College of the University under conditions determined by Ordinances and for this purpose a University Women Students Delegacy has been established.

STUDENTS' INFORMATION BUREAU AND ITS ACTIVITIES

The University does not maintain a Students' Information Bureau.

PROVISION FOR SAFEGUARDING HEALTH, MEDICAL INSPECTION, DISCIPLINE, ETC.

There is a Board which looks after the residence, health and discipline of students and there is one Proctor appointed by the Executive Council. A programme of medical inspection of students is under the consideration of the authorities of the University.

COURSES OF STUDIES, EXAMINATIONS AND DEGREES

- | | |
|---|---|
| (a) Faculty of Arts and the Faculty of Social Sciences. | B.A. (Pass) and Hons. B.Com., M.A. (Lib. Sc.) ; M.A., M.Com., and Ph.D. |
| (b) Faculty of Science | .. B.Sc. (Pass) and Hons., B.Sc. Hons. Nursing ; B.Sc. Home Science, M.Sc., Ph.D. |
| (c) Faculty of Law | .. LL.B., B.C.L. (Honours Course), LL.M., LL.D., Ph.D. |
| (d) Faculty of Education. | B.Ed., M.Ed. and Ph.D. |
| (e) Faculty of Agriculture and Forestry. | B.Sc. Hons. in Agriculture |
| (f) Faculty of Medical Sciences | M.B., B.S., M.Sc., M.D., M.S., Ph.D. |
| (g) Faculty of Technology, | B.E., B.Ch.E., B.Text., B.Arch., Ph.D. |

In addition to the above degrees, the University awards Certificate of Proficiency and Diploma in Russian (two and three-year courses), certificate in German, French and Italian, a Diploma in Hindi, a Diploma in Punjabi, a Diploma in Tuberculous Diseases, a Diploma in Library Science (a one-year post-graduate course). Certificate of Proficiency in Law (one year post-graduate course) ; Diploma in Economics Statistics (two years post-graduate course) ; Diploma in Economic Administration (one year post-graduate course). There is a Pre-Medical I.Sc. course for the benefit of students who want to join a medical College.

QUALIFYING EXAMINATION

The Preparatory Course leading to the Qualifying Examination is of one year's duration. This is a post-matriculation course.

The subjects for the examination are as follows:—

Compulsory Subjects—

Every candidate must take the following three papers:

Two papers in English.

One paper in a Modern Indian Language, including an Essay.

Provided that candidates whose mother-tongue is other than Hindi, Urdu, Bengali, Punjabi or Sindhi who had not taken any of these languages in their Matriculation or equivalent examination shall be permitted to take an additional paper from the list of elective or additional subjects in lieu of the paper in a Modern Indian Language.

ELECTIVE SUBJECTS

Subject as above, every candidate must also take, in addition to three compulsory papers, three papers from any one of the following groups:—
GROUP A—Sanskrit, Arabic, or Persian, Elements of Economics, Civics, General History, Commerce, Geography (including Commercial Geography), Mathematics (Algebra and Trigonometry), Book-keeping and Accountancy, Elements of Psychology or Elements of Deductive Logic or Elements of Inductive Logic. GROUP B—Mathematics (Algebra and Trigonometry).

Physics (Practical 30 marks and written 70 marks).

Chemistry (Practical 30 marks and written 70 marks).

Elements of Biology (Practical 30 marks and written 70 marks).

The course of study in Physics, Chemistry and Elements of Biology includes demonstration and practical work, and there is a practical test in the examination.

Each paper is of three hours' duration and carries 100 marks (written and practical).

The minimum number of marks required to pass the examination is thirty-three per cent in each subject.

Candidates must pass in the practical test as well as in the written paper in a Science subject.

A candidate who gets 40 per cent of the aggregate number of marks but fails in one subject only obtaining not less than 25 per cent marks in that subject is placed in compartment.

English is the medium of examination. But the examinations to be held in 1956, students will have the option to answer their question papers in Hindi in respect of all the subjects comprised in the Faculties of Arts and Social Sciences excepting English, Mathematics and Modern Indian Languages.

The examination fee payable by a candidate is Rs. 15

PRE-MEDICAL EXAMINATION

The course is of two years' duration and is roughly of the I Sc. (Medical Group) standard.

Every candidate is required to take four subjects only as follows, each carrying 150 marks:—(1) English, (2) Physics (including Mathematics), (3) Chemistry, (4) Biology.

The minimum number of marks required to pass this examination is thirty-three per cent in each subject. For each Science subject this percentage is required separately in written and practical work

Candidates who gain three hundred and sixty marks or more are placed in the First Division: those who gain not less than two hundred and seventy marks in the Second Division, and all below in the Third Division.

Any candidate who has obtained 40 per cent of the aggregate number of marks but has failed in one subject only, obtaining not less than 25 per cent in that subject, is admitted to an examination in that subject only towards the end of the year, or, if he fails then, at the next University Examination, on payment of a fee of thirty-five rupees, or in the case of an ex-student of thirty-five rupees, on each occasion, and if he passes in that subject in either of these examinations he is deemed to have passed the Pre-Medical Examination.

Provided that candidates to whom this concession is granted may be allowed to read for the Degree of Bachelor of Science in a College.

Any candidate who has passed the Intermediate Examination of an Indian University in Arts or the Science Faculty, and wishes to qualify for admission to a Medical College may, in any subsequent year, appear in any additional test in the remaining subjects so as to make up the group of subject required for admission to such college after pursuing a course of study for not less than three academic terms.

ADMISSION EXAMINATION

With the abolition of the Intermediate Course, the University has instituted an Admission Examination for the benefit of those students who want to migrate to this University from any other recognised University or Board after completing the first year of the Intermediate Course. The Examination is held in July. Every candidate is examined in English, a Modern Indian Language and three other subjects, one paper in each. The syllabus is of a general nature suitable to the first year students of other Universities and Boards. Every candidate in order to pass, must obtain at least 33 per cent marks in the aggregate.

English is the medium of examination in all subjects but the candidates have the option to give their answers to the questions in Hindi in respect of the following optional subject:—

- (1) Economics, (2) History, (3) Commerce, (4) Geography, (5) Civics, (6) Deductive Logic, (7) Inductive Logic, (8) Psychology, (9) Mathematics.

The examination fee payable by a candidate is Rs. 15.

BACHELOR OF ARTS (PASS)

The course is of three years' duration.

Every candidate is required to take English and one of the Modern Indian Languages, namely, Hindi, Urdu, Bengali, Punjabi and Sindhi and one of the following groups of two subjects:—(i) History and Economics, (ii) History and Philosophy, (iii) History and a Classical Language (Sanskrit, Arabic or Persian), (iv) Economics and Philosophy (v) Philosophy and a Classical Language (Sanskrit, Arabic or Persian), (vi) Mathematics and Economics, (vii) Economics and a Classical Language (Sanskrit, Arabic or Persian), (viii) Mathematics and Philosophy, (ix) Mathematics and a Classical Language (Sanskrit, Arabic or Persian), (x) Economics and Commerce, (xi) History and Commerce, (xii) Mathematics and Commerce, (xiii) Mathematics and History, (xiv) History and Political Science, (xv) Philosophy and Political Science, (xvi) Economics and Political Science, (xvii) Law and Political Science.

Candidates who cannot offer any of the Modern Indian Languages recognised by the University, for valid reasons may offer any two of the three papers in a subject which they have not otherwise offered.

There are three papers in each subject except in a Modern Indian Language in which the number of papers is two.

Each paper carries 100 marks.

Minimum number of marks required to pass this examination is 40 per cent in English and a Modern Indian Language, thirty-three per cent in each of the other subjects, and forty per cent in the aggregate.

Provided that in Commerce, a candidate, in addition to obtaining 33 per cent in the three papers shall obtain not less than 25 per cent in Paper I (Book-keeping and Accountancy).

Candidates who pass the examination with sixty per cent or more marks in the aggregate are declared to have passed with "Distinction", the other successful candidates are placed in the "Pass List" without any classification.

Any student who obtain at least forty-five per cent of the aggregate marks, but fail in one subject only, obtaining not less than twenty-five per cent of the marks in that subject, may be declared to have passed the examination if for every mark by which he is short of the minimum pass marks in that subject, he has scored three additional marks in the aggregate above forty-five per cent.

Any candidate who has obtained not less than forty-five per cent of the aggregate marks, but has failed in one subject only obtaining not less than 25 per cent of the marks in that subject, may be admitted to a Compartmental Examination in that subject only, or if he fails to pass or fails to present himself at the Compartmental Examination, then, at the next annual examination on payment, on each occasion of the same fees as are prescribed for the B.A. (Pass) Examination and he shall be declared to have passed the B.A. (Pass) Examination in the year in which he successfully completes the examination if he secures in that subject the percentage of marks as hereinafter required.

Forty-five per cent of marks in English and in any of the Modern Indian Languages, and forty per cent in the aggregate.

English is the medium of examination for all the subjects except in Modern Indian Languages in which the language concerned is the medium of examination. But from the examination to be held in 1956, students will have the option to answer their question papers in Hindi in respect of all the subjects comprised in the Faculties of Arts and Social Sciences, excepting English, Mathematics and Modern Indian Languages.

The examination fee payable by a candidate is Rs. 30.

COMPULSORY TEST IN HINDI

Every person admitted from the session commencing in July, 1952, to any of the courses of study for the degrees named below shall be required to pursue a course of study and to pass an examination in Hindi :—

B.A. (Pass).

B.Sc. (Pass).

B.Sc. Home Science.

M.B., B.S.

B.A. and B.Sc. (Hons.).

B.Sc. Hons. in Nursing.

B.Sc. Hons. in Agriculture.
 B.Com.
 B.E.
 B.Ch.E.
 B.Text.
 B.Ach.

But foreign students are exempted from taking the compulsory test in Hindi.

(ii) The examination in Hindi shall consist of one paper and the standard and scope shall be those set out hereinafter.

The marks required to pass the examination shall be 33 per cent.

(iii) The examination in Hindi may be taken at the end of the first, second or subsequent year but no person shall be declared to have passed any of the degree examinations named in sub-clause (i) unless he has passed the examination in Hindi or has been exempted under sub-clause (iv) below.

(iv) Persons who have passed any of the following examinations with Hindi as a subject for the examination concerned, shall be exempted from the provisions laid down in clauses (i) and (ii) above:—

- (a) Qualifying or Admission Examination held by the University of Delhi.
- (b) The Higher Secondary Examination conducted by the Board of Higher Secondary Education, Delhi.
- (c) The Intermediate Examination of an Indian University.
- (d) Any examination recognised as equivalent to (a), (b) or (c) above.
- (e) The Oriental Titles or Diploma Examinations of an Indian University incorporated by any law for the time being in force.

(v) The examination shall include the following:

Grammar	..	..	..	10 marks
Composition	..	..	..	40 marks
Translation of passages from English to Hindi				
and <i>vice versa</i>	..	..	..	25 marks
Books for rapid reading	..	..	..	25 marks

Note.—1. Books for rapid reading are not meant for intensive study. They are meant as books for general reading only.

2. The test in the examination shall consist in expression of simple ideas on the part of students in an elementary form of the Hindi language.

No examination fee is payable by the candidate.

BACHELOR OF ARTS (HONOURS)

The course is of three years' duration.

The following is the distribution of papers in the subjects of the Honours Course :—(a) English—Main Subject 8 papers, Subsidiary Subjects 4 papers, (b) History—Main Subject 8 papers, Subsidiary Subjects 4 papers, (c) Economics—Main Subject 8 papers, Subsidiary Subjects 4 papers, (d) Philosophy—Main Subject 8 papers, Subsidiary Subjects 4 papers, (e) Mathematics—Main Subject 8 papers, Subsidiary Subjects 4 papers, (f) Philosophy, Politics and Economics (combined)—Main Subject 10 papers, Subsidiary Subject 1 paper, (g) Sanskrit—Main Subject 8 papers, Subsidiary Subjects 4 papers, (h) Arabic—Main Subject 8 papers, Subsidiary Subjects 4 papers, (i) Persian—Main Subject 8 papers, Subsidiary Subjects 4 papers, (j) Urdu with Persian—Main Subject 8 papers, Subsidiary Subjects 4 papers, (k) Hindi with Sanskrit—Main Subject 8 papers, Subsidiary Subjects 4 papers, (l) Political Science and Law—Main Subject 8 papers, Subsidiary Subjects 4 papers, (m) Political Science—Main Subject 8 papers, Subsidiary Subjects 4 papers, (n) Punjabi—8 papers, Subsidiary—4 papers.

SCALE OF MARKS

Every paper in an Honours Course carries 100 marks.

CLASSIFICATION OF RESULTS

(1) Candidates who pass in an Honours Course are classified in three divisions.

(2) The minimum number of marks required to pass an examination in Honours Course is 40 per cent in the aggregate of the papers in the Main Subject.

The minimum percentage of marks required to pass the examination in a Subsidiary Subject is 33.

(3) Candidates who secure less than 50 per cent marks in the Main Subject are placed in the third division.

(4) Candidates who secure 50 per cent or more but less than 60 per cent marks in the Main Subject are placed in the second division.

(5) Candidates who secure 60 per cent marks or more in the Main Subject are placed in the first division.

A candidate who has passed in the Main Subject of an Honours Examination, but has failed in one of the Subsidiary Subjects only, obtaining not less than 25 per cent of the marks, may be admitted, if he applies within the prescribed time, to a compartmental examination in that subject only, or, if he fails to pass or fails to appear, then at the next annual examination on payment on each occasion of the same fees as are prescribed for the Honours Course Examination, and if he passes

in the Subsidiary Subject, he shall be declared to have passed the examination in the year in which he passes the Subsidiary Subject. If no application is made within the prescribed time, he may be granted a Pass Degree.

A Pass Degree shall be granted to a candidate who has passed in the Subsidiary Subjects, but has failed in the Main Subject of the Honours Examination, provided that he has secured in the Main Subject not less than 30 per cent marks in the aggregate of the written papers and 33 per cent marks in the Practical Test separately.

The examination fee payable by a candidate is Rs. 45.

BACHELOR OF SCIENCE (PASS)

The course of three years' duration.

Every candidate shall be required to take:—

- (1) A Test in English at the end of the first academic year.
- (2) A Qualifying Test in any one of the subjects under Group 'A' at the end of the second academic year.
- (3) An examination in any three of the subjects under Group 'B' at the end of the third academic year.

Group 'A'—

History of Science and Scientific Method, Hindi, Urdu, Bengali, Punjabi and Sindhi.

Group 'B'—

MATHEMATICS

Paper I—Algebra, Trigonometry and Analytical Geometry of two Dimensions.

Paper II—Differential and Integral Calculus and Differential Equations.

Paper III—Statics, Dynamic and Hydrostatics.

Note.—Each of the written papers shall be of three hours' duration and carry 100 marks.

PHYSICS

Paper I—General Properties of Matter, Light and Heat.

Paper II—Sound, Electricity and Magnetism.
Practical Test.

Note.—Each of the written papers shall be of three hours' duration and carry 100 marks. The Practical Test shall be of five hours' duration and carry 100 marks out of which 20 marks shall be reserved for the Laboratory Records of the candidate.

CHEMISTRY

Paper I—Inorganic and Physical.

Paper II—Organic and Physical.

Practical Test.

Note.—Each of the written papers shall be of three hours' duration and carry 100 marks. The Practical Test shall be spread over two days each of four hours' duration. The Practical Test shall carry a total of 100 marks out of which 20 marks shall be reserved for the Laboratory Records of the candidate.

BOTANY

Paper I—Morphology and life history of Cryptogams and Phanerogams.

Paper II—Taxonomy, Physiology, Ecology and General Biology.

Practical Test.

Note.—Each of the written papers shall be of three hours' duration and carry 100 marks. The Practical Test shall be of four hours' duration and carry 100 marks out of which 20 marks shall be reserved for the Laboratory and Field Records of the candidate.

ZOOLOGY

Paper I—Invertebrata.

Paper II—Vertebrata.

Practical Test.

Note.—Each of the written papers shall be of three hours' duration and carry 100 marks. The Practical Test shall be of four hours' duration and carry 100 marks out of which 20 marks shall be reserved for the Laboratory and Field Records of the candidate.

2. A candidate who fails to pass the Qualifying Test or Tests at the end of the first or the second academic year, as the case may be, may appear again at any subsequent examination.

A candidate for the B.Sc. (Pass) Degree who attains the Pass standard in his Three Science Subjects of Group 'B' but fails to attain the necessary standard in either, or both, of his Qualifying Subjects shall have to appear in the required Qualifying Test or Tests only and if successful, shall be declared to have passed the B.Sc. (Pass) Examination but shall not be eligible for the award of the B.Sc. Degree with Distinction.

A candidate who is admitted to the first or second year of the course is exempted from taking the Test in English if he had passed the Pre-Medical, Pre-Engineering or the Intermediate Examination or an equivalent examination with English as one of the subjects.

3. English shall be the medium of examination in all subjects except in Modern Indian Languages in which the language concerned shall be the medium of examination.

Examination fee payable by a candidate is Rs. 40.

B.Sc. (HONS.)

1. Subjects of Honours Examinations:—

1. Physics.
2. Chemistry.
3. Botany.
4. Zoology.

2. The Honours Examination for the Degree of Bachelor of Science shall include:—

- (1) A Qualifying Test in English at the end of the first academic year—One Paper.
- (2) A Qualifying Test in History of Science and Scientific Method at the end of the second academic year—One Paper.
- (3) An Examination in Two Subsidiary Subjects at the end of the second academic year.
- (4) An Examination in the Main Subject at the end of the third academic year.

3. Qualifying Tests—

A candidate who fails to pass the Qualifying Test or Tests at the end of the first or the second academic year, as the case be, may appear again at any subsequent examination.

4. Examination in Subsidiary Subjects—

(a) Every candidate must offer two Subsidiary Subjects (which shall be other than the one offered as the Main Subject), taken from the following:—

1. Mathematics.
2. Physics.
3. Chemistry.
4. Botany.
5. Zoology.

Note.—The combination of options shall be subject to the approval of the Admission Committee.

(b) A candidate who does not pass the examination in the Subsidiary Subjects at the end of the second academic year may appear again at any subsequent examination.

The examination in the Subsidiary Subjects shall consist of the following papers:—

Physics—

Paper I—Properties of Matter, Heat and Light.

Paper II—Sound, Electricity and Magnetism.
Practical Test.

Note.—Each of the written papers shall be of three hours' duration and carry 100 marks. The Practical Test shall be of five hours' duration and carry 100 marks out of which 20 marks shall be reserved for the Laboratory Records of the candidate.

Chemistry—

Paper I—Inorganic and Physical.

Paper II—Organic and Physical.
Practical Test.

Note.—Each of the written papers shall be of three hours' duration and carry 100 marks. The Practical Test shall be spread over two days each of four hours' duration. The Practical Test shall carry a total of 100 marks out of which 20 marks shall be reserved for the Laboratory Records of the candidate.

Botany—

Paper I—Morphology and life history of Cryptogams and Phanerogams.

Paper II—Taxonomy, Physiology, Ecology and General Biology.
Practical Test.

Note.—Each of the written papers shall be of three hours' duration and carry 100 marks. The Practical Test shall be of four hours' duration and carry 100 marks out of which 20 marks shall be reserved for the Laboratory and Field Records of the candidate.

Zoology—

Paper I—Invertebrata.

Paper II—Chordata.
Practical Test.

Note.—Each of the written papers shall be of three hours' duration and carry 100 marks. The Practical Test shall be of four hours' duration and carry 100 marks out of which 20 marks shall be reserved for the Laboratory and Field Records of the candidate.

Mathematics—

Paper I—Algebra, Trigonometry, Analytical Geometry of two Dimensions.

Paper II—Differential Calculus—Integral Calculus, Differential Equations.

Paper III—Statics and Dynamics.

Note.—Each of the written papers shall be of three hours' duration and carry 100 marks.

5. The Examination in the Main Subject shall consist of the following papers :—

Main Subject: *Physics*—

Paper I—Mathematics relevant to Physics.

Paper II—General Properties of Matter and Sound.

Paper III—Heat and Thermodynamics.

Paper IV—Optics.

Paper V—Elasticity and Magnetism.

Paper VI—Atomic Structure.

Practical Test.

Note—Each of the written papers shall be of three hours' duration and shall carry 100 marks. Practical Test shall consist of two papers each of five hours' duration. The Practical Test shall carry a total of 300 marks of which 75 marks shall be reserved for the Laboratory Records of the candidate.

Main Subject: *Chemistry*—

Paper I—Organic Chemistry A

Paper II—Organic Chemistry B

Paper III—Physical Chemistry A

Paper IV—Physical Chemistry B

Paper V—Inorganic Chemistry A

Paper VI—Inorganic Chemistry B

Practical Test.

Note.—Each of the written papers shall be of three hours' duration and shall carry 100 marks. The Practical Test shall consist of three papers each of five hours' duration. The Practical Test shall carry a total of 300 marks out of which 75 marks shall be reserved for the Laboratory Records of the candidate.

Main Subject: *Botany*—

Paper I—Bacteria Algae, Fungi, Lichens and Plant Pathology.

Paper II—Bryophytes, Pteridophytes and Gymnosperms.

Paper III—Angiosperms.

Paper IV—Physiology, Ecology and Plant Geography.

Paper V—Cytology, Genetics, Plant Breeding and Evolution.

Paper VI—Economic Botany, History of Botany.

Practical Test.

Note.—Each of the written papers shall be of three hours' duration and shall carry 100 marks. The Practical Test shall consist of three papers each of five hours' duration. The Practical Test shall carry a total of 400 marks out of which 100 marks shall be reserved for the Laboratory and Field Records of the candidate.

Main Subject: Zoology—

Paper I—General Biology.

Paper II—Invertebrata.

Paper III—Entomology.

Paper IV—Chordata.

Paper V—Fishes.

Paper VI—Cytogenetics and Animal Physiology.

Practical Test.

Note.—Each of the written papers shall be of three hours' duration and shall carry 100 marks. The Practical Test shall consist of three papers each of five hours' duration. The Practical Test shall carry a total of 400 marks out of which 100 marks shall be reserved for the Laboratory and Field Records of the candidate.

Qualifying Marks and Classification of Results

(a) The minimum number of marks required to pass the Qualifying Test and Examination in the Subsidiary Subject is 33 per cent. In a Subsidiary Subject for which Laboratory work is prescribed this percentage is required in the aggregate of the written papers and the aggregate of the practical papers separately.

(b) In order to pass in the Main Subject a candidate must obtain not less than 40 per cent marks in the aggregate of the written papers and in the aggregate of the practical papers separately.

(c) Candidates who pass the examination for the Bachelor of Science Honours degree are classified in the three divisions:—

- (i) Candidates securing less than 50 per cent of the total number of marks in the Main Subject are placed in the third division :
- (ii) Candidates securing 50 per cent and more but less than 60 per cent marks in the Main Subject are placed in the second division ;

- (iii) Candidates who secure 60 per cent marks or more in the Main Subject are placed in the first division.

A candidate who has failed to attain the Honours standard but has passed the Qualifying Test and the examination in the Subsidiary Subject and has obtained not less than 33 per cent of the total number of marks in the Main Subject is awarded a Pass Degree.

(d) A candidate for an Honours Degree who attains the Honours standard in his Main Subject but fails to attain the necessary standard in either his Subsidiary Subjects or Qualifying Tests or both, may be allowed to present himself for a re-examination in those subjects at the Compartmental Examination and if he fails to pass or fails to present himself at the Compartmental Examination, then at the next Annual Examination and if successful shall be given an Honours Degree but without class provided that in the case of subjects including practicals, the candidate may be required to do additional practical work.

(e) A student who has taken a Pass Degree and has been admitted to an Honours Course shall not be required to take the Qualifying Test in English and the Examination in such of the Subsidiary Subjects which he had passed at the B.Sc. Examination but shall have to appear in the paper on the History of Science and Scientific Method provided he has not passed this at the B.Sc. (Pass) Examination. He will be awarded the B.Sc. (Honours) Degree on his passing the Examination in the Main Subject and on his qualifying in the paper on History of Science and Scientific Method and such of the Subsidiary Subjects which he had not offered at the B.Sc. Examination.

B.Sc. (HONS.) COURSE IN NURSING

The course extends over a period of four academic years. The qualifications required for admission to the course are the same as for the other B.Sc. (Hons.) courses of the University.

The course includes the following subjects:

- (a) Main Subject—Nursing,
- (b) One Subsidiary Subject (Elementary Science) two written papers and Practical Test,
- (c) One Qualifying Subject—English and

Any one of the following qualifying subjects:

- (i) History of Science and Scientific Method.
- (ii) World History.
- (iii) Modern Indian History.
- (iv) Modern Indian Language.

Main Subject : There shall be nine written papers and three practical tests.

Paper I—Physiology and Anatomy	..	100
Paper II—Elementary Nursing	..	100
Paper III—Preventive Medicine	..	100
Paper IV—Psychology	..	100
Paper V—Medical Nursing including communicable diseases, Tuberculosis, materia medica and diet in disease	.. ..	100
Paper VI—Surgical Nursing including Orthopaedics Gynaecology, eye, ear, nose and throat	.	100
Paper VII—Paediatric Nursing including Child development and Child Psychology	..	100
Paper VIII—Public Health Nursing including Mental Hygiene	..	100
Paper IX—Midwifery	..	100

Practical Tests—

Paper I—Nursing Elementary	100
Paper II—Nursing advanced	100
Paper III—Midwifery	100

	1,200

Note.—Each of the written papers shall be of three hours' duration.
In each practical test 50 per cent of the marks shall be reserved for the practical class records and the ward report records.

Examination in the Main Subject :

- (a) The examination in the Main Subject shall be divided into three parts called Part I, Part II and Part III, respectively. Part I examination shall consist of Papers I and II and Practical Test I.
Part II examination shall consist of Part III to VII (five papers) and Practical Test II; and
Part III shall consist of Papers VIII and IX, and Practical Test III.

B.Sc. IN HOME SCIENCE EXAMINATION

COURSES OF READING

<i>Qualifying Subjects</i>	<i>Theory</i>	<i>Practical</i>
Paper I—Physics	100	50
Paper II—Chemistry	100	50
Paper III—Biology	100	
Paper IV—English	100	

PAPER I

PHYSICS

THEORY

Properties of Matter and Elementary Mechanics

Three states of matter and their characteristics. Units of measurement. Measurement of length, area, volume and mass. Hydrostatics, fluid pressure, principle of Archimedes, floating bodies, Hydrometers, Lactometer, determination of Specific Gravity of solids and liquids.

Atmospheric pressure, Barometer and its relation to weather conditions, Boyle's Law, Air pump.

Velocity, Acceleration, Momentum, Newton's laws of motion force, work, mass and weight. Scalars and Vectors, Motion in a circle, simple harmonic motion (not mathematically). Simple pendulum. Law of gravitation. Gravity. Friction.

HEAT

Effect of heat, Linear and cubical expansion. Temperature and its measurement; Calibration and errors of a mercury thermometer; Fahrenheit and Centigrade scales; Clinical, Maximum and Minimum Thermometers. Specific heat, Thermal capacity, Newton's Law of Cooling. Conduction, Convection and Radiation, Mechanical equivalent of heat.

LIGHT

Rectilinear propagation of light, shadows and eclipses, pinhole camera; reflection; refraction; prism; lens; Concave mirrors; colour of bodies; Velocity of light. Dispersion. Spectrum.

SOUND

Longitudinal and transverse waves, propagation and velocity of sound in air (experimental), Determination of frequency—siren, vibration of air columns, Law of vibration of strings; musical notes; noise, echoes, whispering galleries.

MAGNETISM

Permanent magnets and Electromagnets; Magnetic field and lines of force; Neutral point; Magnetic induction; Magnetisation; Mariner's compass. Elementary ideas about terrestrial magnetism.

ELECTRICITY

Static Electricity—electrical induction; gold leaf electroscope electric field; potential; capacity; distribution of charge over the surface of a conductor; atmospheric electricity. Current electricity; heating and chemical effects of electric currents; different types of primary cells and accumulators, series and parallel arrangement of cells. Simple ideas about Electrolysis and Electroplating; magnetic effects of currents, moving coil galvanometer, Ammeters, and Voltmeters.

Ohm's Law ; definition of Ampere, Ohm, Watt, Kilowatt-hour, parallel and series connections of resistances, Faraday's Law of Electro-magnetic Induction.

PRACTICAL

List of Experiments

1. Use of a Vernier and measurement of lengths with its help.
 2. Resultant of two parallel forces.
 3. Simple pendulum.
 4. Co-efficient of friction.
 5. Density of light and heavy solids by the principle of Archimedes.
 6. Density of soluble and insoluble solids by specific gravity bottle.
 7. Density of liquids by Nicholson's hydrometer and test tube.
 8. Verification of Boyle's Law.
 9. Determination of specific heat of solids and liquids by the method of mixtures.
 10. Velocity of sound by resonance-tube method and end correction.
 11. Verification of the Sine-Law of refraction.
 12. Refraction through prism ; minimum deviation and total internal reflection.
 13. Study (by the method of parallax) of position and nature of images formed by
 - (i) Plane mirror
 - (ii) Concave mirror
 - (iii) Convex lens
 14. To determine the focal lengths of concave mirrors and convex lenses.
 15. Tracing of the magnetic lines of force and the location of neutral points.
 16. Measurement of resistance by voltmeter and ammeter.
 17. Comparison of E.M.F.'s of two cells by Potentiometer.
 18. Charging of gold leaf electroscope by induction and testing the charges.
 19. To determine the mechanical equivalent of heat by the mechanical method.
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PAPER II
CHEMISTRY

THEORY

General

Methods for the purification of substances and separation of mixtures.

Chemical Change:—Its characteristics and distinction from physical change. Distinctions between chemical compound and mechanical mixture; conditions that influence chemical action. Different kinds of chemical action.

Chemical symbols and formulas, calculation of empirical formulae from percentage composition and *vice versa*. Significance of empirical and molecular formulae. Positive and negative radicals and their valencies.

The Chemical equation and its significance. Methods of balancing equations. Calculation based on equations.

Law of Chemical combination, (1) Conservation of Mass, (2) Definite proportions, (3) Multiple proportions, (4) Equivalent proportions, (5) Gas volumes.

Statement and applications of Boyle's Law, Charles' Law, Dalton's Law of partial pressures; gaseous diffusion.

Molecular weight by the application of Avogadro's Hypothesis.

Definition of equivalent weights and atomic weights of elements. Simple methods for the determination of equivalent weights of elements.

Acids, bases and salts. General methods of their preparation, their general characters, classification and nomenclature.

Relation between molecular weight, equivalent weight, basicity and acidity. Determination of equivalent weights of acids and bases by the volumetric method.

Influence of concentration, temperature and pressure and catalytic agents on chemical reactions in general, without mathematical treatment. Gaseous dissociation.

Electrolytes and non-Electrolytes, Electrolysis; Laws of Electrolysis. Important applications of Electrolysis.

Elementary treatment of the ionic theory. Explanation of Electrolysis, acids, bases and neutralisation.

In-organic :

NON-METALS

Occurrence, preparation, properties and important uses of the following :

- (a) Hydrogen, Oxygen, Ozone, Sulphur, Nitrogen, Phosphorus and Carbon. The industrial preparation of O_3 and N_2 from air, Hydrogen and Chlorine by the electrolytic process.
- (b) Preparation, important properties and simple tests of the following compounds:—Water, hydrogen fluoride, chloride, bromide and iodide, peroxide and sulphide; sulphur dioxide, sulphur trioxide; nitric and nitrous acids; oxides of nitrogen, phosphoric acid, carbon monoxide and carbon dioxide. Important methods of manufacture of bleaching powder, sulphuric acid, ammonia, nitric acid, boric acid and borax.
- (c) Elementary study of the following:

Oxidation and reduction. Important oxidising and reducing agents.
Coal gas and oil gas used in the Laboratories.

METALS

- (a) Occurrence, properties and modern uses of the following metals, Na, K, Cu, Ag, Mg, Zn, Hg, Al, Sn, Pb, As, Fe. Gold. Elementary study of the extraction of those underlined.
- (b) Characteristics, properties and important uses of the important alloys of the following metals:—
Cu, Mg, Zn, Al, Sn, Ph, Bi, Fe (alloy steels).
- (c) Study of the properties and important uses of the following metallic compounds:—Sodium hydroxide, peroxide, carbonate, bicarbonate, chloride, sulphate, thiosulphate, nitrate, nitrite, cyanide, phosphate; potassium chlorate, bromide, iodide and nitrite. Ammonium Sulphate, Chloride and Carbonate, cupric sulphate, Silver nitrate, Silver halides, calcium oxide and hydroxide. Plaster of Paris, Calcium Carbonate, carbide and chloride, Magnesium oxide, carbonate and sulphate, Zinc oxide, Mercurous chloride, Mercuric oxide and chloride, Aluminium oxide and sulphate, Potash alum, white lead, red lead, Arsenious oxide, Bismuth nitrate and Bismuth subnitrate, Chrome alum, Potassium chlorate and dichromate manganese dioxide, Potassium permanganate, ferrous sulphate, ferric chloride, potassium ferrocyanide, potassium ferricyanide.

Simple methods of preparation of those underlined.

CARBON COMPOUNDS

Characteristics of organic compounds; Classification of organic compounds (aliphatic and aromatic). Criteria of purity of organic compounds.

General methods of preparation, and properties of methane and ethane.

Preparation, properties and uses of ethylene and acetylene.

PRACTICAL

List of Experiments

1. (a) Study of Bunsen Flame, bending of tubes and drawing the jet.
(b) To prepare a wash bottle.
2. Filtration, Distillation, Decantation, Sublimation and Crystallisation.
3. Preparation and verification of the properties of the following gases :—
 O_2 , H_2 , Cl_2 , CO_2 , NH_3 , H_2S , SO_2
4. To prepare and verify the properties of HCl .
5. Properties of different acids and bases, neutralisation (titration).
6. Salt Analysis :—To test a given substance to find out what acid radical is present.

BASIC RADICALS

7. I Group. Reactions of Ag, Pb, Hg(ous).
8. IIA Group. Reactions of Hg (ic), Pb (ic), and Cu.
9. IIB Group. Reactions of As and Sn.
10. III Group. Reactions of Fe, Cr. and Al.
11. IV Group. Reactions of Ni, Mn and Zn.
12. V Group. Ba and Ca.
13. VI Group. Reactions of Mg, Na, K and NH_4 .
14. Systematic analysis of a simple substance.

VOLUMETRIC ANALYSIS

15. Use of a Pipette, Burette, etc., and the preparation of standard normal, etc. solutions.
16. To find the strength of a solution of HCl by means of a standard solution of $NaOH$.
17. (a) To prepare a decinormal solution of Na_2CO_3 .
(b) To standardise a given solution of an acid.
18. To make a decinormal solution of H_2SO_4 from the acid on your bench.
19. (a) To determine the equivalent weight of an acid.
(b) To determine the basicity of an acid of known molecular weight.
(c) To determine the molecular weight of an acid of known basicity.
20. To prepare a decinormal solution of Oxalic Acid and to estimate the strength of a solution of $KHMNO_4$ by means of it.

GRAVIMETRIC ANALYSIS

21. To estimate the amount of CuO obtained from a given sample of Cu salt.
22. To estimate the amount of MgO obtained from a given weight of Mg metal, and find the equivalent weight of Mg.
23. To demonstrate the effect of heat on $\text{Pb}(\text{NO}_3)_2$.

PAPER III**BIOLOGY****THEORY****1. General :**

Definition and scope of biology ; differences between living and non-living organisms and between plants and animals.

2. Basis of life :

Protoplasm, its composition and physical and chemical properties.

3. Unit of life :

The structure of a typical cell, cell division, tissue formation.

PLANT KINGDOM**4. Divisions of the Plant Kingdom.****5. Angiosperms :**

- (i) *Parts of an ordinary plant*
- (ii) *Root, its functions and types*
- (iii) *Shoot, its functions and types*
- (iv) *Leaf, its functions and types*
- (v) *Flower and its parts*
- (vi) *Pollination and Fertilization.*
- (vii) *Seeds* (such as gram, maize and castor), morphology and germination.
- (viii) *Fruit, formation and types ; mode of fruit and seed dispersal.*

6. Reproduction :

Vegetative and sexual.

7. Physiology :

The intake and loss of water ; mineral nutrition ; photosynthesis ; nitrogen assimilation ; enzymes ; respiration ; growth, movements.

8. (i) *Algae.* General study (types : Ulothrix, Spirogyra).
- (ii) *Bacteria.* Forms and reproduction.

- (iii) *Fungi*. (a) Saprophytic, as illustrated by mucor and yeast
(b) Parasitic, as illustrated by wildew, rusts and smuts.
- (iv) *Mosses and Ferns*. General character.
- (v) *Gymnosperms*. General character, as illustrated by Pinus

ANIMAL KINGDOM

9. Classification of the animal kingdom, with reference to the following representative types :

Amoeba, sponge, hydra, liverfluke, round worm, earthworm, insects, starfish, mollusc, river fish, frog, lizard, snake, bird and mammal.

- 10. Functional anatomy of amoeba, earthworm and a mammal rabbit.
- 11. Spermatogenesis, oogenesis and fertilization.
- 12. A general comparison of the reproductive processes and modes of development in frog, birds and mammals, omitting embryological details.
- 13. Elementary knowledge of evolution and heredity.

PRACTICAL

- 1. (i) Microscopic anatomy of root, stem and leaf.
(ii) Microscopic study of the following important tissues :—
Epithelium, cartilage, bone, nerve, muscle, blood of frog and mammal.
 - 2. Morphology and germination of seeds, maize, gram, bean, castor
 - 3. Morphology of root, stem, leaf and flower.
 - 4. Study of different types of fruits.
 - 5. Plant Physiology : Demonstration of simple experiments on
 - (i) Osmosis
 - (ii) Transpiration
 - (iii) Photosynthesis
 - (iv) Respiration
 - (v) Growth
 - 6. Microscopic examination of Bacteria, Amoeba, Ulothrix, Spirogyra and Mucor.
 - 7. Study of general characters of moss, fern, and gymnosperms (Pinus) by hand lens and prepared microscopic slides.
 - 8. External features and identification of types mentioned under No. 9 theory.
 - 9. Study of types as mentioned under No. 10 theory.
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PAPER IV

ENGLISH

The English paper will consist of an essay, precis writing, tests in Vocabulary and any other form of Composition that may be suitable. The essay will carry about a third of the maximum marks carried by the entire paper.

The standard of the paper shall be the same as Paper III in English of the B.A. Pass Course.

MAIN SUBJECT

<i>Group A—</i>	<i>Theory.</i>	<i>Practical.</i>
I. Housewifery	100	50
II. Household Biology	100	50
III. Physiology and Anatomy	100	—
IV. Hygiene	100	—
V. Elements of Economics	100	—

PAPER I

HOUSEWIFERY

THEORY

A general discourse on the subject, its scope and its value.

House

Site, building, materials used, structure and plan. Modes of ventilation and light.

Natural and artificial coolness and warmth in the house.

Sanitary arrangements—(a) Dry conservancy, (b) Water carriage system.

House Decoration

Exterior and interior.

Interior decoration, a study of colour schemes, furnishing and furniture, beauty and harmony.

Interior decoration of Indian homes during the last hundred years.

Choice and purchase of furnishing and furniture.

House Cleaning

Organization and planning of work for daily, weekly and spring cleaning.

Types of cleaning appliances and cleansing agents.

Care and cleanliness of the surroundings.

General

Uses and methods of cleaning metals in household use, viz., aluminum, copper, brass, silver, tin, galvanised iron.

Cleaning methods and use of pottery and porcelain in household use.

Methods of preventing and destroying mosquitoes, flies, bugs, cockroaches, ants white ants, rats and mice.

Arrangement, preparation and treatment of the sick room.

Household accounts and family budget.

PRACTICAL

- (i) Arrangement of different rooms in the home in the modern Indian style.
- (ii) Simple household repairs and renovations, viz., putting in a fuse, repainting of furniture, mending of curtains and refitting of washers in the taps.
- (iii) Cleaning of rooms and different surfaces.
- (iv) Preparation of simple polishes and their effect on different surfaces.
- (v) Cleaning of utensils, crockery, glass and cutlery by home and commercial cleansing methods.
- (vi) Preparation of flit and kerosine oil emulsion as repellent.

PAPER II
HOUSEHOLD BIOLOGY**THEORY****I. Gardening :**

1. Plant life ; reproduction, nutrition, etc.
2. Soil operations, tillage, drainage, manures and fertilisers, weeding,
3. The laying out of a garden.
4. Seed and vegetative propagation, Grafting, budding, layering.
5. Kitchen garden : important summer and winter vegetables of Delhi, such as potato, tomato, pea, carrot, cauliflower, onion, brinjal, lady's finger, pumpkin and cucumber.

Flower garden : the more important decorative plants such as rose, chrysanthemum, astor, zinnia, dhalia, canna and snapdragon.

7. The maintenance and care of lawns and hedges.
8. (i) Fruit trees : mango, guava, lime, banana, papayá.
(ii) Ornamental trees and shrubs : jacaranda, poinciana, polyalthia, bignonia, cassia, norium, thevetia, bougain villæa.

- II. Bacteria and moulds, general characteristics and control.
- III. External features and methods of control of housefly, mosquito, cockroach, clothes' moth, silver fish, white ant and rat.
- IV. Economic biology of entameœba, malarial parasite, lice, flea, bed bug, round worm, thread worm and tape worm.
- V. The housing, feeding, milking and common ailments such as Binderpest, foot and mouth, Surra, tuberculosis and Johne's disease, pneumonia, nutritional diseases of cattle, buffalo and goat. Important breeds of livestock in India.
- VI. Poultry keeping: housing, feeding and common ailments such as ranikhet, fowl-pox, fowl cholera, external parasites (ticks, mites and lice) oil glands and roup.
- VII. The honey bee: its life history and habits, honey plants.
 - 1. Collection and identification of important field and garden plants and weeds.
 - 2. Usual gardening operations, preparation of beds, potting, sowing, pruning, grafting and layering.
 - 3. A hand lens study and microscopic demonstration of the types mentioned under II, III and IV in the theory.

PAPER III

PHYSIOLOGY AND ANATOMY

Surface anatomy and introduction of the Physiology and Anatomy of the body as a whole.

Elementary study of connective, adipose, cartilage and bone tissues.

The Cutaneous tissue—structure and function of skin, regulation of body temperature.

Skeletal system—joints.

The Muscular system—structure and function of major muscles.

Lever action. Body posture.

Respiratory system—the structure and function of lungs.

The Circulatory system—functions, heart and the mechanism of circulation, arterial, venous and lymphatic systems.

The Nervous system—elementary study of nerve tissue, brain, spinal cord, autonomic and sympathetic nervous system, reflex action.

The special senses and organs of touch, taste, smell, sight and hearing.

The Digestive system—Anatomy and Physiology of the alimentary tract. Digestion, absorption, metabolism of carbo-hydrates, fats and proteins in detail.

The Urinary system and the Urinary tract.

Reproductive system :

- (a) The female reproductive system, structure and function, menstruation, reproduction.
 - (b) The male reproductive system.
- Endocrine Glands.

PAPER IV

HYGIENE

Introduction

- I. Concept of positive health including physical, mental and emotional health.
- II. *Personal Hygiene of :*
 - (a) Skin, eyes, nose, hair, throat, teeth, nails, menstruation and bathing.
 - (b) Weight and height, posture, exercise, recreation, rest and habits.
 - (c) Clothing and bedding.
- III. *Social Customs :*
 - Early marriage, purdah system, effects with special reference to health.
- IV. *General Hygiene :*
 - Sources of water supply and its purification. Water works.
 - Sanitation—different types—Disposal of sewage.
 - Impurities in atmosphere ; ventilation and their effects on health.
 - Sun stroke and heat stroke.
 - Heating, cooling and lighting.
 - Value of sun for healthy growth.
 - Municipal and District Health Services :—Civic duty of the individual towards the health problem of the country.
 - Birth and death rates.
- V. *Infectious diseases :*

Causes, prevention, symptoms and care of common infectious diseases caused through direct and cross infection, e.g., Cholera, Dysentery, Diarrhoea, Typhoid, Tuberculosis, Influenza, Common cold, Small-pox, Measles, Mumps, Whooping Cough, Ringworm, Leprosy, Hydrophobia, Optuالمia, Plague, Malaria, Kala Azar, Dengue, Filariasis.

PAPER V

ELEMENTS OF ECONOMICS

(With special reference to Domestic Economy)

I. The nature and contents of the economists' problem—economic problem as a problem of choice.

The economic problem in the domestic sphere—the many wants of a householder and his limited means

The meaning as economy—Selective distribution of income among goods—Purchases at given prices—Family budget.

II. The conception of marginal utility—Law of diminishing marginal utility—Working of the principle of substitution or the process of trial and error—the principle of equimarginal utility—Equimarginal utility as the objective of household expenditure—Expenditure on present goods (consumption) and future goods (savings)—Equilibrium, a position of "Maximum" satisfaction.

Necessaries, luxuries and conventional necessities—Significance of the distinction—the conception of elasticity of wants. Demand schedule—Individual demand schedule and market demand schedule—the Law on demand—Changes in demand.

III. Nature of production—Organization of production—Cost of production—Laws of production—Equilibrium between production and consumption—National income and expenditure.

IV. Nature of exchange—Exchange as an adjustment between demand and supply—Commodity market—Prices as given data—Advantages of cheapness (consumer's surplus) as a source of consumer's welfare.

V. The economic system—the modern economic order—the economic transition in India—Division of labour—Private property and inheritance—the use of money—Functions of Banks—Private finance and public finance—Government expenditure and the domestic economy—Prices and taxes.

VI. Factors affecting family budgets—Direct and indirect taxation—Municipal rates—Prices control and rationing—Price fluctuations—General index number—Cost of living index number—Advent of new commodities—Substitute goods—Postponable consumption—Class standard of consumption.

VII. Individual income derived from national income—Money income and real income, their deviation—the Indian national income—India a low-level economy—Causes of poverty—Agrarian excess population—the conception of a balanced economy—the problems of economic development—the Indian population—Maldistribution of over-production—Standard of living and population.

BOOKS RECOMMENDED

1. Pigou—Income.
2. Hicks—The Social Frame Work.
3. Hobson—Work and Wealth (relevant portion).
4. Wells—Work, Wealth and Happiness of Mankind (relevant portion).
5. Wadia and Merchant—Our Economic Problem (relevant portion).

<i>Group B—</i>	<i>Theory.</i>	<i>Practical</i>
I. Cookery	50	100
II. Laundry	50	100
III. Needle Work	50	100
IV. Dietetics and Bio-Chemistry	100	50
V. Household Physics	100	50
VI Household Chemistry	100	50
VII Child Psychology and Parent-craft	100	—

PAPER I
COOKERY**THEORY**

Kitchen: Planning, arrangements and care.

Kitchen Equipment: Choice, purchase and care.

Store-room and its management:

(a) Aspect and ventilation.

(b) Size—floor, wall, cupboards, shelves for store-rooms, for various types of kitchens.

Marketing and keeping of accounts.

Methods of storage—Perishable and non-perishable.

Weights and measures.

Fuels—Types, suitability and storage.

Cooking :

Methods of cooking and their effect on food-stuffs, losses in cooking.

Cooking of fish, meat, cereals, vegetables, fruit, milk, and milk products.

Principles of wheat preparations, broths, soups, sauces, halwas, curries, bread making and germination of pulses.

Principles and importance of making salads, koshambirs and raitas in diet.

Cooking terms—stirring, beating, cutting and folding, grating, whisking, stuffing and filling.

Menu making :

- (a) Importance of planning meals.
- (b) Principles of menu making, making of menus for daily meals, and for special occasions such as teas, dinners, picnics and luncheons.
- (c) Special diets' rules for preparation of :
 - (1) Infants' and children's diet.
 - (2) Invalid diets.
- (d) Knowledge of typical provincial diets and service. Management of festivals, formal and informal parties.

Deterioration of food, methods of preservation, canning, bottling, drying and cold storage.

PRACTICAL*Invalid Cookery :*

1. Albumen water, rice water, barley water, tamarind drink, lemonades, rice puddings, boiled custard, steamed custard, vegetable soups, egg flip, Benger's food, arrowroot, whey (lemon and rennet), sago puddings.

- 2. (a) Rice preparations :—Plain rice, fried rice, khichri, soft khichri, (invalid diet), tahri, meat, biryani, sweet rice (zarda).
- (b) Dal preparations :—Arhar, mung (also for an invalid diet), channa, masur, pakoras, dahi baras, cutlets.
- (c) Vegetable preparations :—Vegetables cooked as bhujias and curries, vegetable cutlets, boiled and steamed vegetables, vegetable stews.
- (d) Meat preparations :—Plain mutton curry, meat curry with vegetables or dals, mutton korma, hussaini curry, mince curry, kofta curry, fried koftas, shami kabab, seek kabab.
- (e) Fish preparations :—Fried curry, molee, boiled, steamed and stuffed fish, fish cutlets, baked fish, fish augretin, fish pakoras.
- (f) Egg preparations :—Boiled, poached, fried, scrambled, omelette, curry, stuffed eggs, scotch egg.
- (g) Atta preparations :—Phulkas, paratha, plain puri, stuffed puries, sweet and savoury, kachori, samosa.
- (h) Milk preparations :—Dahi, channa, junket, butter, cheese, butter milk, kheer, firni, paneer sweets.
- (i) Preparation of raitas, koshambirs, chutneys and salads. Dressings for salads—plain, French and mayonnaise.
- (j) Soups and sauces—white sauce, brown sauce, tomato sauce, bread sauce, meat soup, vegetable soup, dal soups.
- (k) Roast—grill, stew, cutlets and chops.
- (l) Beverages—tea, coffee, cocoa, sherbats.

- (m) Indian 'sweets' such as jellabies, halwa, gojas, boondi, gulab-jaman, laddus, sandesh, burfi, satpura, shakarparas.
 - (n) Cakes—fancy cakes and icing of cakes.
 - (o) Pastries—patties, sausage rolls, eclairs, fruit flans.
 - (p) Puddings—steamed pudding, cold cream pudding, souffles, jellied fruit.
 - (q) Savouries—sev, cheese, straws, badies tikhias.
3. Preparation of :—
- (a) Pickles, jams, jellies, squashes.
4. Experimental cookery :—
- (a) Comparative study of different types of fuel and cooking apparatus with regard to economy of labour and time.
 - (b) Working out of palatable recipes from cereals such as juar, ragi, bajra, soya-beans to suit different tastes.
5. Planning and preparation of special diets for :
- (a) Children of different age groups
 - (b) A college student.
 - (c) An office clerk.
 - (d) A labourer.
 - (e) A nursing mother.

PART II

LAUNDRY

THEORY

Textiles and Clothing :

1. Textiles, fibres and materials—natural and synthetic. Manufacture—finishing of fabrics, properties and reactions of textile fibres to various laundry reagents.
2. Brief study of fabrics of historical interest (Indian) such as carpets—viz. Kashmir shawls Phulkhari, Kantha—gold and silver embroideries, Tie-dye-fabrics.
3. Storage of clothing and household textiles.
4. Equipment for laundering in the home.
5. Hardness in water. Effects in laundering; water softening.
6. (a) Detergents—soap and soap powders.
 - (b) Soapless washes—sulphonated fatty alcohols, bran, glue, salammioniac, reeta nut.
 - (c) Laundry reagents.
7. Stain removal and bleaches.

8. Principles of cleansing and their application.
9. Laundering of cotton and linen fabrics—white and coloured.
10. Laundering of silk and woollens.
11. Laundering of Nylons and Rayons.
12. Treatment of fine fabrics—Dacca muslins, laces, baby garments.
13. Treatment of special articles—razais, blankets, chamaois leather gloves—weather-proof coats, leather and plastics.
14. Disinfection of clothing.
15. Dyes and dyeing (modern).
16. Dry cleaning—use of absorbents and solvents.

PRACTICAL

1. Experiments to find the reaction of fabrics (white and coloured) to various laundry processes.
2. Microscopic examination of different fibres.
3. Experiments to illustrate the action of different laundry reagents on fabrics—
 - (a) boiling water
 - (b) weak acids and alkalies
 - (c) cheap bazar soap
 - (d) dhobi's mud
 - (e) reeta nut
4. Experimental work on various laundry blues.
5. Experimental work on various starches
6. Stain removal and use of chemical stain removers, e.g. Javelle water, potassium permanganate solutions, hydrogen peroxide.
7. Laundering of:—
 - (a) Cotton and linen fabrics—white and coloured.
 - (b) Woollens—white and coloured, socks and stockings, new woollens, blankets.
 - (c) Silks.
 - (d) Rayon and Nylon.
 - (e) Razais, curtains, gloves, lace, infants' clothing.
8. Soapless washes—Synthetic detergents, bran, sal-ammoniac and glue washes.
9. Disinfection.
10. Dry cleaning.
11. Family wash.
12. Dyeing of garments using household and commercial dyes—Bandana work.
13. Use of indigenous dyes of India.
14. Block printing—printing of fabrics.

PAPER III

NEEDLE WORK

THEORY AND PRACTICAL

1. Use and care of the sewing machine and its gadgets.
2. Elementary steps in sewing:—
 - (a) Different kinds of stitches used in garment making, e.g., hemming, top sewing, tacking, run and back, back stitch, feather stitch and herring bone.
Decorative stitches, such as cross stitch, hem stitch, blanket or loop stitch, button-hole stitch.
 - (b) Processes :
 - (i) Introducing of fullness—different methods.
 - (ii) Sewing on of fasteners.
 - (iii) Eyelets and button-holes.
 - (iv) Seams—French, run and fell, run and seam, Mantua maker, and counterhem seam.
 - (v) Crossway pieces and application.
 - (vi) Plackets—uneven hem, false hem—continuous wrap.
3. Mending:—
 - (a) Patches.
 - (b) Darns—stocking and hedge tear.
4. Drafting, adaptation of patterns, garment making, calculation and choice of material:—
 - (a) Children's jhangia, knickers, rombers and frock.
 - (b) Women's—saree-petticoat, blouse, brassieres, adult bodice block and its adaptation to blouse, sleeve, block, child's bodice block and its adaptation to frock.
5. Embroidery—designing and colour combinations.

PAPER IV

DIETETICS AND BIO-CHEMISTRY

THEORY

I. Foods :

Composition of the body. Function of food in daily life. Proximate principles of food, proteins, fats, carbohydrates vitamins and minerals—factors affecting digestion—roughage in the diet—basal metabolism and utilisation of energy, calories.

Classification of natural foods according to their nutrient composition, their requirement in normal diet. Special requirements in pregnancy, lactation, infancy, childhood, adolescence and old age.

Calculation of requirements for balanced diets in different ages, sex, occupation and economic groups—menu planning for different groups: families, hospitals, schools, etc.; developments of nutritional methods in relation to large-scale catering.

Special study of some of the important protective foods, cereals and pulses.

Relation of food intake to health and well being—significance of optimum nutrition, malnutrition, undernutrition, deficiency including elementary study of hormonal and amino acid deficiency diseases.

Effects of the various methods of cooking, different foodstuffs—losses in cooking—food habits and psychology—properties of condiments (sauce, vinegar, masalas, etc.).

Fluid, soft and convalescent diet—diet in diseases—infant feeding, artificial foods—complementary and supplementary feeding—modification of cow's milk—patent foods for infants and invalids.

Diet in diseases such as diabetes, obesity, constipation, diarrhoea

Storage methods for different types of foods—deterioration in storage and its control—domestic and industrial methods of preservation of foods—dehydration and freezing of foods—hygiene in the kitchen and storage of cooked foods—canning and bottling of foods—sterilization of food—pasteurisation of milk—hygienic handling of foods with special reference to bacterial infection—food poisoning by bacteria or their toxins.

The technique of diet surveys and its importance—use of table of food values—average composition of diets consumed in different parts of India—critical review of the dietary deficiency.

II. *Physiological Chemistry* :

Digestion, absorption and metabolism of fats, proteins, carbon-hydrates and nucleic acid—importance of minerals in human body, vitamins, digestive juices, enzymes, ferments, and hormones. Chemistry of blood and urine. Chemistry of respiration—metabolic abnormalities.

PRACTICAL

1. Reactions of sugars, starches, carbohydrates and dextrins.
2. Tests for proteins and estimation of protein in food.
3. Properties and detection of fat in food and its estimation.
4. The acid value, iodine value, saponification value and R. M. value of fats and oils.
5. Tests for preservatives, colours, and poisonous elements in food (excluding micro-methods of detection).
6. Action of enzymes and yeast.
7. Testing of vinegars.
8. Examination of egg, egg powder, and meat.
9. Study of milk, milk powder and adulteration in milk.

10. Examination of butter and its adulteration.
11. Composition of bread, cereal foods, honey, gur, jams, baking powder and other raising agents.
12. To analyse normal and abnormal urine.
13. Microscopic examination of blood, muscular tissue, starches and milk.

PAPER V

HOUSEHOLD PHYSICS

THEORY

Mechanics :

Air appliances : vacuum cleaners, i.e., sweepers, carpet and other floor cleaners.

Kitchen appliances : dish-washing machines, clothes-washing machines, wringers, driers, household irons, stove, fire extinguishers, syphon, gas meters, cream separator.

Simple types of water pumps, cycle pump. Applications of Pascal's Law in town and home water supply. Hydrometers and Lactometers.

Centre of Gravity. Toys based on Centre of Gravity. Machines and mechanical advantage. Mechanical appliances in the home, i.e., Pullies and lever appliances, balance, window sashes, etc. Flying of a kite. Elementary ideas about flight of aeroplanes.

Heat :

Elementary ideas about internal combustion and steam engine. Change of state, Latent heat, Freezing mixtures, Evaporation, Boiling point, Change of boiling point with pressure, Humidity, Relative humidity and dew point. Atmospheric phenomena like rain and fog. Wet and dry bulb hygrometer.

Common sources of heat, combustion, stove and other heat appliances. Fire-place, boilers, central heating. Cooking range and other cooking appliances like steam cooker. Temperature control and thermostats.

Refrigerator—Electrolux and frigidaire, thermosflasks, air-conditioning, application of conduction and radiation to keeping warm, e.g., clothes and their colours, heat protection of houses, double roofs, etc. Ventilation.

Light :

Dispersion of light. Spectrum. Defects of human vision and their remedy. Photographic camera ; enlarger. Developing and printing of photographic pictures. Projecting lantern, epidiascope, binoculars and opera glasses. Telescopes, microscopes and elementary study of cinematograph.

Electricity and Magnetism :

Dynamo ; motor, induction coil, electric bell, telephone, telegraph, relays. Household electric wiring, fuses, heating and lighting appliances—Heaters, lamps. Cost of electric energy. Electro-plating.

Discharge of electricity through gases. Discharge tubes—Mercury and Neon lamps. Fluorescence tubes. Cathode-rays and X-rays. Radio-activity. Radium and its uses.

Elementary ideas of Electron and Radio Valves.

Elements of Radio Transmission and Reception.

Sound :

Beats, Consonance and Dissonance. Musical scales—Diatonic and tempered, Musical instruments—harmonium, sitar, flute. Resonance. Recording and reproduction of sound—Gramophone, Acoustics of buildings (elementary).

PRACTICAL

1. To determine the mechanical advantage and velocity ratio for an inclined plane.
 2. To determine the latent heat of ice.
 3. To determine the dew point and relative humidity by wet and dry bulbs.
 4. To set up a Daniel Cell and to measure its voltage.
 5. To set up a Leclanche Cell and to measure its voltage.
 6. To wind a small-electro-magnet.
 7. To set up an electric bell.
 8. To set up a telephone set.
 9. To set up a simple telegraphic system.
 10. To make a simple radio set.
 11. To repair electric heaters, irons, stoves, ovens, kettles and other appliances used in the home.
 12. To repair fuses and electric fittings of a room.
 13. To electroplate metals.
 14. To take a photograph, develop and print it.
 15. To make an enlarged picture.
 16. To set up a simple telescope and a microscope.
 17. To throw a spectrum of white light on a screen.
 18. To find the frequency of various musical notes by a sonometer.
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PAPER VI
HOUSEHOLD CHEMISTRY

- (A) Elementary analysis of organic compounds—qualitative and quantitative, Nitrogen by Dumas and Kjeldahl, Sulphur and Halogen by Carius.

Isomerism of paraffins.

Elementary study of petroleum industry. Preparation, properties, uses and constitution of Ethyl and Methyl alcohols.

Alkyl halides, preparation, properties and uses of (a) Chloroform, (b) Carbon tetrachloride, (c) iodoform and (d) ethyl chloride.

Reactivity of aliphatic halogen compounds.

Ether, general methods of preparation and properties. Manufacture of ethyl ether, its chemical properties, uses and constitution.

General methods of preparation properties and tests of aldehydes and ketones. Detailed study of formaldehyde and acetaldehyde and acetone.

General methods of preparation, properties and uses of (i) Formic and Acetic Acids, (ii) Ethyl Acetate, (iii) Amino Acetic Acid and Chloroacetic Acid, (iv) Urea, (v) Oxalic, (vi) Lactic, (vii) Tartaric and (viii) Citric Acids.

Elementary study of fats and oils, soaps and candles.

Preparation and uses of Glycerol.

Carbohydrates

- (a) Occurrence, preparation and properties of Glucose, Fructose, Sucrose, Lactose and Maltose.

Coal tar distillation. Properties of aromatic hydrocarbons, their distinctive features, e.g., Sulphonation, nitration and Friedel and Crafts' reaction. The ring structure of benzene but not the theories.

Preparation, properties, uses and structure of Benzene and Isomerism of Benzene derivatives.

Preparation and properties of nitro-benzene, aniline, acetanilide and benzyl amine.

Diazotization and Diazo-transformation of aniline.

Preparation, properties and uses of phenol, and cresols and their commercial preparations.

Preparation and properties of (a) Benzaldehyde, (b) Acetophenone, (c) Benzoic and phthalic acids, (d) Aspirin, (e) Chlorobenzene, (f) Benzylchloride and (g) Benzene Sulphonic Acid. Elementary study of the properties and uses of dyestuffs, antiseptics, disinfectants, essential oils and flavouring agents.

(b) Chemistry of Household materials

1. Household materials. Metals used in the household, their preservation, maintenance and cleaning.
2. Materials used in house construction and in household use. Metals and wooden materials.
3. Precautions against insects, weather and fire, fire extinguishers.
4. Common cosmetics, their preparation, use and analysis.
5. Study of enamels, glazes and stainless steel.

Chemistry related to Hygiene

1. Composition and purity of water, water purification and water softening.
2. Composition of air, poisonous gases.
3. Micro-organisms and decay of matter. Disposal of sewage, septic tanks and sewage farms.
4. Fuels, composition, combustion and calorific value.

*Chemistry related to Fabrics*1. *Fibre content—*

- (a) Protein—(i) natural, (ii) manufactured.
- (b) Cellulose, natural (e.g., Cotton, Linen), manufactured (Rayon).
- (c) Synthetic (e.g., Nylon, Vinyon).
- (d) Minerals (e.g., Asbestos, metal fibre).
- (e) Miscellaneous (e.g., Glass).

2. *Properties of fabrics—*

- (a) Strength.
- (b) Crease resistance.
- (c) Fire resistance.
- (d) Moth resistance.
- (e) Shrinkage.
- (f) Water repellancy.
- (g) Water absorption.
- (h) Weight.

PRACTICAL

1. Determination of melting and boiling points.
2. Preparations of iodoform, ethyl acetate, acetanilide and chloroform.
3. Reactions of groups; identification of important compounds:—alcohol, acetone, acetic acid, formic acid, iodoform, glycerol, ether, formaline, urea, uric acid, glucose, phenol, benzoic acid, salicylic acid, aniline, nitrobenzene.

4. Estimation of salinity and hardness in water.
 5. The action of heat and air on various metals.
 6. To demonstrate the effect of acids, alkalis and salts on metals.
 7. Methods of cleaning silver and other bright metals.
 8. Composition of toilet creams and powder (qualitative).
 9. Composition of the given metal, leather and wood polishes (qualitative).
 10. To investigate the chemical nature of the textiles.
 11. To investigate the action of heat, acids, alkalies and salts on textiles.
 12. Different methods of loading silk and cotton.
 13. Testing of silk and cotton for weighing.
 14. To illustrate the fire proofing of cotton materials and to compare the efficiency of different methods.
 15. Testing the composition and quality of textile materials.
 16. Mercerisation.
 17. Identification of the common bleaching agents.
 18. Action of the common bleaching agents on the various types of fabrics (common).
 19. Experiment to show the use of mordant dyes (common).
 20. Preparation of soap by the boiling and cold processes.
 21. Analysis of soaps—use of ordinary and dry cleaning soaps.
 22. Greases and their removal.
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PAPER VII

CHILD PSYCHOLOGY & PARENT CRAFT

Value of the study of early childhood. Growth of the child, Guidance, Movement in England and early diagnosis of temperamental abnormalities.

Methods of study, observation, experimentation, mental testing, biographical studies.

The Mental Development of the Child

1. *Infancy (0 to 1 year) :*

Inventory of the first year of the child's life. Types of infantile motor behaviour. Positive, negative and spontaneous movements.

Difficulties in the first year ; feeding difficulties, sucking difficulties, toilet habits, sleeping habits, screaming and crying fits.

2. *The Pre-School Period (1 to 5 years) :*

Perceptual and adaptive behaviour. Locomotion and manipulation. Variations in rates of development. Effects of too early training. Play and language. The child's response to materials. Psychological significance of feeding and weaning. Training in cleanliness. Social development in the pre-school age. Difficulties in the pre-school period. Obstinacy, destructive behaviour, abnormal fears, social maladjustment, exhibitionism, sex difficulties.

3. *The middle years of childhood (pre-adolescent)—School period (6 to 12 years) :*

Intellectual growth. The school beginner, his interests and activities. Successful school adaptation. Social and emotional development. Play : organised and unorganised games. Play materials, hobbies.

Difficulties of the middle school period. Backwardness and educational difficulties, delinquency and anti-social behaviour, anxiety conditions and habit disorders.

4. *Adolescence :*

Physical changes in adolescence. Instructive and emotional life. Escape and defence mechanisms. Emotional maturing, learning at adolescence. The hygiene of adolescence. Special difficulties during adolescence. Delinquency and personal maladjustment: Frequent use of defence mechanisms, over-timidity, sense of inadequacy. Over-compensation. Hero worship. Guidance of the adolescent.

The Child and the Parent

1. The primitive feelings of the child. The Baby's love. Frustration and anger. Mothering the new baby. The only child. The age of questions. Dominance and submissiveness. Obedience to parental commands. The need for freedom.

2. Sibling rivalries.

3. Foster parents. Step-children. The pampered child, favouritism in the home.

4. Some theories : (a) the Psycho-Analytic theory. Role of Oedipus Complex in Child behaviour. (b) Adler's theory of the will to power. Role of individual members of the household.

The Child and the Teacher

(1) *Individual differences*

How they are measured. Individual work. Mental Ratio. Backwardness in Reading, Writing and Arithmetic.

(2) *Instruction and educational advancement*

Sensory stimuli in the perceptual world of the child. Visual aids in education, Attention and tension. Development of interest. Children's thinking. The beginning of reason. Learning and remembering. Creative and reproductive imagination. Suggestion and suggestibility. Intellectual and aesthetic emotions. Child art and symbolism.

(3) *The total life of the school*

Social life in the infants' school. Children's ideas and notions of punishment. Loving and hating. Chums and heroes. Social imitation. Psychology of the Boarding School.

The Child and Society

(a) *Social influences*

On the mind of the child.

(i) *The Family*

Family traditions. Imitation of adult behaviour, assertion, submission, display, shyness. The understanding of spoken language. Formalities in the home.

(ii) *The Community*

Social norms and caste restrictions. The role of ceremonials and religious rites. Responsiveness to public opinion and social criticism.

(iii) *Regional Groups*

The concept of nationality. National symbols and leaders. Public opinion, the press, the cinema, the wireless. The influence of cultural traditions through folk tales, classical literature and mythology, art and music.

(b) *The child's fitness for life*

(i) *Intelligence and general ability*

Its measurement.

(ii) *Tests of aptitudes*

Mechanical aptitude, spatial perception, music, arithmetic.

(iii) *Personality tests*

Level of Aspiration Test, Questionnaires, Projection Techniques.

Special forms of Child behaviour

1. *Superior Intelligence*

Its characteristics. The apprehension of ideas of number. The apprehension of shape Colour discrimination and colour preference. The understanding of pictures.

2. *Defectiveness and deficiency*

Mental deficiency and its relation to heredity. Micro and macrocephalic idiocy. Cretinism. Deaf mutes. Blind children. Need for special treatment.

3. *Perversions and criminal tendencies*

Drug addiction and smoking, pathological lying, stealing, begging.
Functions of juvenile courts. Reorientation of the juvenile offender.

4. *Nervousness and maladjustment*

The nervous child. Problem children. Negativism in child behaviour. Anxiety neurosis. Epilepsy. Role of the psychiatrist. Play therapy. Group therapy. Education of parents.

B.SC. HONS. IN AGRICULTURE

The course extends over three years.

A student seeking admission to the course of study and examination for the degree of Bachelor of Science Honours in Agriculture shall satisfy the following conditions:—

(a) He must have passed—

(i) the Higher Secondary Examination of the Board of Higher Secondary Education, Delhi in Group 'B' with the following subjects:—

- (1) Physics,
- (2) Chemistry, and
- (3) One optional subject in the group or an examination recognised as equivalent thereto

or

(ii) the Qualifying Examination of the University of Delhi with Group 'B' with—

- (1) Physics,
- (2) Chemistry, and
- (3) Biology or Mathematics.

or

(iii) Intermediate Science Examination of a recognised University

or

(iv) the Admission Examination of Delhi University with—

- (1) Physics,
- (2) Chemistry, and
- (3) Biology or Maths.

Note.—Senior Cambridge Examination will be treated at par with the Higher Secondary Examination of Delhi State.

The minimum number of marks required to pass the I year Examination is 33 per cent in each subject and 40 per cent in the aggregate. The minimum number of marks required to pass the II and III year Examinations is 40 per cent in each subject and 45 per cent in the aggregate.

MASTER OF ARTS

1. (A) Every candidate seeking admission to the Examination for the Degree of Master of Arts shall satisfy the following conditions:—

- (i) He must have passed an Honours Examination of the University of Delhi or of any other recognised University.
- (ii) He must have passed the B.A. or B.Sc. Examination of the University of Delhi or an examination recognised as equivalent thereto securing 45 per cent marks in the aggregate or 50 per cent marks in the subject offered for the course.
- (iii) He must have pursued a regular course of study as hereinafter prescribed for not less than two academic years.

No candidate is considered to have pursued a regular course of study unless he is certified by the Dean of the Faculty and the Principal.

The M.A. course consists in each case of one subject of study from among the following:—

- (1) Languages (English, Arabic, Persian, Sanskrit, Urdu, Hindi or Punjabi).
- (2) History.
- (3) Economics.
- (4) Mathematics.
- (5) Philosophy.
- (6) Social Work.
- (7) Political Science.

There shall be eight papers in each subject for the M.A. Examination except English, Sanskrit, Hindi, History, Mathematics and Political Science in which the examination shall consist of two parts—

- (a) Previous Examination and
 - (b) Final Examination each comprising of four papers.
- Each paper is of three hours' duration and carries one hundred marks.

Candidates offering Social Work as their subject will be required to satisfy the examiners as to their Field Work experience through an oral examination and through submission of reports or demonstration or other evidence of proficiency.

- (a) The minimum number of marks required to pass the examination is 40 per cent in the aggregate, but not less than 25 per cent in each paper.
- (b) Candidates who gain 60 per cent or more of the aggregate marks are placed in the first class; those who gain not less than 50 per cent in the second class, and all below in the third class.

A candidate may be permitted by the Committee of Courses and Studies concerned to offer a dissertation in lieu of a paper as prescribed by regulations and under the following conditions:—

- (i) He must have obtained 55 per cent marks in the B.A. (Hons.) Examination, and
- (ii) The subject of his dissertation should be approved by the Committee of Courses and Studies.

M.COM.

Qualifications for admission—B.A. (Hons.) in Commerce or B.Com. Examination. The course runs for two years. The following is the schedule of papers prescribed for the M. (Com.) Examination:—

Paper I—Applied Economics.

Paper II—Modern Finance.

Paper III—Business Administration.

Paper IV—Statistics or Advanced Statistics.

(Candidates who had offered Optional Group D (Statistics) at their B.Com. Examination shall have to offer Advanced Statistics for Paper IV, others will offer Statistics for this paper.)

Paper V—Company Law.

Paper VI—Labour Legislation.

Paper VII—Taxation.

Paper VIII—Advanced Accounting Problems or Insurance.

Each paper is of three hours' duration and carries one hundred marks.

A candidate, in order to qualify for the M.Com. degree shall in addition to passing in the written examination, undergo practical training to the satisfaction of the Head of the Department in an industrial or commercial establishment approved by the University for a period not less than three consecutive months either during the long vacation intervening the two sessions or after taking the M.Com. Examination; provided that, in the latter case, such training is ordinarily taken within a period not exceeding one year from the commencement of the M.Com. Examination.

(a) Minimum number of marks required to pass the examination is 40 per cent in the aggregate; but if a candidate gets less than 25 per cent in any one paper the marks obtained in that paper shall not be counted towards the aggregate.

(b) Candidates who gain 60 per cent or more of the aggregate marks are placed in the first class; those who gain not less than 50 per cent in the second class and all below in the third class.

MASTER OF SCIENCE

1. A student seeking admission to the M.Sc. Course in Physics, Chemistry, Botany and Zoology must have passed :

(a) B.Sc. (Hons.) Examination of the Delhi University or of any other Indian University incorporated by any law for the time being in force or an examination recognised as equivalent thereto ; and the subject offered for the M.Sc. Course must have been the main subject at the Honours Examination taken by him.

Note—A candidate who has passed the three-year Honours Course Examination in Mathematics (as his Main Subject) with Physics as the Subsidiary Subject will be eligible for admission to the M.Sc. Course in Physics.

(b) B.Sc. (Pass) or B.A. (Pass) Examination of a recognised University or an examination recognised as equivalent thereto, provided that he must have secured at least 60 per cent marks in subject offered for the M.Sc. Course.

2. A student seeking admission to the M.Sc. Course in Anthropology must have passed :

(a) B.Sc. (Hons.) or B.A. (Pass) Examination recognised as equivalent thereto with Anthropology, Chemistry, Economics, Geology, Mathematics, Physics, Physiology, Zoology, Botany as one of the subjects and provided that he must have secured at least 45 per cent marks in the aggregate

The M.Sc. Examination consists of two parts:—

(a) Previous Examination, and (b) Final Examination.

Every candidate seeking admission to the M.Sc. Previous Examination must have pursued a regular course of study, as hereinafter prescribed, for not less than one academic year.

Every candidate seeking admission to the Final Examination for the Degree of Master of Science must satisfy the following conditions:—

- (a) He must have passed the M.Sc. Previous Examination of the University in the subject offered for the Final Examination ;
- (b) He must, after passing the examination, have pursued a regular course of study, as hereinafter prescribed for not less than one academic year.

The M.Sc. Previous Examination consists of the following papers:—

Physics—

Paper I—Mechanics and Relativity Theory, 100 marks.

Paper II—Quantum, Mechanics, X-rays and Atomic Structure, 100 marks.

Paper III—Electromagnetic Theory and Elementary Electronics, 100 marks.

Papers IV and V—Practical Test, 200 marks.

Note.—Each of the written papers is of three hours' duration and the practical paper of six hours' duration. One-fourth of the marks for the practical papers are reserved for the Laboratory Record Book of the candidate.

Chemistry—

Paper I—Inorganic and General Chemistry, 100 marks.

Paper II—Physical Chemistry, 100 marks.

Paper III—Organic Chemistry, 100 marks.

Papers IV and V—Practical in Inorganic, Physical and Organic Chemistry, 200 marks.

Note.—Each of the written papers is of three hours' duration and the practical papers of nine hours' duration. One-fourth of the marks for the practical papers shall be reserved for the Laboratory Record Book of the candidate.

Anthropology—

Paper I—Physical Anthropology.

Paper II—Pre-historic Archaeology and Technology.

Paper III—Social Anthropology and Primitive Religion.

Paper IV—Practical Test for Pre-historic Archaeology and Technology.

Paper V—Practical Test for Physical Anthropology.

Botany—

Paper I—Bacteria, Algae, Fungi, Lichens and Plant Pathology.

Paper II—Bryophytes, Pteridophytes and Gymnosperms.

Paper III—Morphology, Embryology, Anatomy, and Taxonomy of Angiosperms.

Papers IV and V—Practical Examination.

Zoology—

Paper I—Invertebrata (Protozoa, Helminths, Annelida, etc.), 75 marks.

Paper II—Invertebrata (Arthropoda, Mollusca, Echinodermata, etc.), 75 marks.

Paper III—Chordata (Comparative Anatomy and Embryology of Chordata), 75 marks.

Paper IV—Chordata (Systematics, Distribution, etc. of Chordata).

Papers V and VI—Practical Examination, 200 marks.

The M.Sc. Final Examination consists of the following papers:—

Physics—

Paper I—Quantum Mechanics and Electrodynamics, 100 marks.

Paper II—Nuclear Physics and Cosmic Rays, 100 marks.

Paper III—Statistical Thermodynamics and Electron Theory of Metals, 100 marks.

Papers IV and V—Practical Test, 200 marks.

Note.—Each of the written papers is of three hours' duration and the practical papers of eight hours' duration. One-fourth of the marks are reserved for the Laboratory Record Book of the candidate.

Chemistry—

Paper I—Inorganic and General Chemistry, 75 marks.

Paper II—Physical Chemistry, 75 marks.

Paper III—Organic Chemistry, 75 marks.

Paper IV—Special, 75 marks.

Paper V—Practical, 100 marks.

Paper VI—Practical or Thesis, 100 marks.

Note.—(1) Each of the written papers is of three hours' duration and practical papers of nine hours' duration. One-fourth of the marks shall be reserved for the Laboratory Record Book of the candidate.

(2) The thesis and the special paper will refer to the same branch of the subject.

Anthropology—

Paper I—Ethnic History and 'Race Relations.

Paper II—(a) Advanced Physical Anthropology and Human Biology
or

(b) Advanced Social Anthropology.

Paper III—Ethnology of India.

Paper IV—Field Work.

Paper V—(a) Practical in Paper II (a)

or

(b) Practical in Paper II (b).

Botany—

Paper I—Physiology.

Paper II—Cytology, Genetics and Evolution.

Paper III—Economic Botany and Ecology.

Paper IV—Practical Test (for papers I, II & III).

Either Group 'A'.

Paper V—Thesis *viva-voce*.

or Group 'B'.

Paper VI—Special.

Paper VII—Practical.

Zoology—

Paper I—Cytogenetics.

Paper II—Animal Physiology.

Papers III & IV—Two papers on any one of the following special groups:—

(a) Fishes, (b) Entomology and (c) Parasitology.

Papers V & VI—Practical Examination, 200 marks.

The minimum number of marks required to pass the M.Sc. Previous or Final Examination is 40 per cent in the aggregate of the written papers and in the aggregate of the practical papers separately.

Candidates who gain 60 per cent or more of the aggregate marks in the total of their Previous and Final Examinations are placed in the first class; those who gain not less than 50 per cent in the second class; and all below in the third class.

BACHELOR OF LAWS

The course for the LL.B. Degree extends over two academic years and there is a Previous Examination held at the end of the first year and a Final Examination at the end of the second year.

The minimum qualification required for admission to the course for the LL.B. Degree which is of two years' duration, is a Bachelor's Degree in Arts, Science, Commerce or Agriculture of the University of Delhi or a degree of any other University which is recognised as equivalent thereto.

Persons desirous of practising within the jurisdiction of the Punjab High Court have to undergo a further course of study for one year after passing the LL.B. Examination and pass the "Certificate of Proficiency" Examination. Law Graduates of the University of Delhi are eligible for enrolment as pleaders of the Allahabad High Court if they have passed an examination in the Law of Land Tenures, Rent and Revenue in the United Provinces conducted by the University.

The following are the subjects for the Law Examinations, namely:—

(a) *Previous Examination in Law—*

- (i) Roman Law or Outlines of Indian Legal History.
- (ii) Law of Torts.
- (iii) Constitutional Law, English and Indian.
- (iv) Law of Contracts.
- (v) Hindu Law.
- (vi) Mohammedan Law.
- (vi) Equity with special reference to the Law of Trusts and Specific Relief.

(b) *Final Examination in Law—*

- (i) Mercantile Law.
- (ii) Criminal Law and Procedure.

- (iii) Jurisprudence.
- (iv) Civil Procedure.
- (v) Law of Evidence.
- (vi) Transfer of Property and Easements.
- (vii) Public International Law or Private International Law, or Law of Land, Tenures, Rent and Revenue in the United Provinces, or Punjab Land Laws and Customary Law or Law of Land Tenures of any other State in India or Law of Taxation, or Company Law, Labour Law.

A candidate may, with the permission of the Dean, be allowed to offer one more of the above options as an additional subject and he will be given a certificate showing that he has passed in that subject also on his securing not less than 40 per cent of the marks.

In order to pass, a candidate must obtain at least 40 per cent of the marks in each paper and 50 per cent of the marks in the aggregate. Those of the successful candidates who obtain 65 per cent of the marks or more are declared to have passed the examination in the first division and all others in the second division.

A student, who, having attended the prescribed number of lectures, tutorials and sittings of moot court, does not appear at the examination for sufficient cause, or having appeared at the examination is declared unsuccessful, may be allowed to appear at any of the next two annual examinations without attending a fresh course of lectures, tutorials, and sittings of moot court if he is placed by the Registrar on the Register of ex-students under the Ordinance relating to the admission of ex-students.

BACHELOR OF CIVIL LAWS (B.C.L.)

No candidate is eligible for admission to the course for the degree unless he has passed the Examination in First or Second Division for an Honours or Master's Degree in Arts, Science or Commerce or an examination for a Degree in Arts, Science or Commerce of the University of Delhi with distinction. The course extends over a period of three academic years and there is an examination at the end of each academic year. No candidate is allowed to proceed to the next examination unless he has passed the previous one. There is provision for transfer to the LL.B. Course from the B.C.L. Course.

In order to qualify for the degree, a candidate must obtain at least 40 per cent of the marks in each paper and at least 50 per cent of the marks in the aggregate in the examination held at the end of each year's course. A candidate who obtains not less than 65 per cent of marks on the combined results of the B.C.L. Part I, Part II and Final Examinations shall be declared to have passed in the First Division.

LL.M. (MASTER OF LAWS)

1. No person shall be admitted to a course of study for the Degree of Master of Laws in the University unless he is qualified for the Degree of Bachelor of Laws of the University of Delhi or of a University whose Degree of Bachelor of Laws is recognised as equivalent to the Degree of Bachelor of Laws of the University of Delhi or is qualified for the Degree of Bachelor of Civil Law of the University of Delhi.

2. A candidate for the LL M. Examination must have pursued an approved course of study in Delhi under the guidance of the staff of the Faculty of Law of the University of Delhi for not less than two academic years in case he is an LL.B., or for not less than one academic year in case he is a B.C.L. of the Delhi University.

Approved course of study under the guidance of the staff of the Faculty of Law shall mean attendance at Lectures, Seminars and submission of written papers as arranged by the Faculty of Law during the academic year.

A candidate shall be deemed to have pursued an approved course of study, only if—

- (1) he has attended at least two-third of the lectures delivered to the LL.M. Part I Class; and
- (2) he has attended at least TEN of the Seminars conducted for the LL.M. Part II Class, five of which must have been attended before he appears in the written papers.

3. An LL.B. intending to proceed for the LL.M. Degree must pass in Part I as well as in Part II of the LL.M. Examination as hereinafter appearing; he must have passed in Part I Examination before he can appear in Part II Examination.

A B.C.L. intending to proceed for the LL.M. Degree will have to appear and pass in Part II only of the LL.M. Examination.

4. The LL.M. Examination shall be conducted in two parts.

Part I Examination will comprise the following papers:

- | | | |
|---|----|-----------|
| 1. Jurisprudence (Analytical) | .. | One paper |
| 2. Jurisprudence (Historical) | .. | One paper |
| 3. English Legal History | .. | One paper |
| 4. Indian Legal History | .. | One paper |
| 5. Constitutional Law and History of England,
including Commonwealth Relations | .. | One paper |
| 6. Constitutional Law and History of India | .. | One paper |

Part II Examination will consist of four papers, namely, two papers in each of two chosen subjects out of the following list, and a dissertation on a topic approved by the Faculty of Law.

For special provision for candidates who have obtained the B.C.L. Degree under old ordinance *vide* transitory provisions.

(a) *Law of Torts—*

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|-----------------------|----|-----------|
| 1. General Principles | .. | One paper |
| 2. Select Torts | .. | One paper |

(b) *Law of Contracts—*

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|-----------------------|----|-----------|
| 1. General Principles | .. | One paper |
| 2. Select Topics | .. | One paper |

(c) *Mercantile Law—*

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|--|----|-----------|
| 1. Company Law and Partnership and Sale of Goods | .. | One paper |
| 2. Negotiable Instruments, Banking and Carriage by Land, Sea and Air | .. | One paper |

(d) *Hindu Law—*

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|---|----|-----------|
| 1. History Sources and General Principles | .. | One paper |
| 2. Select Topics | .. | One paper |

(e) *Mohammedan Law—*

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|---|----|-----------|
| 1. History Sources and General Principles | .. | One paper |
| 2. Select Topics | .. | One paper |

(f) *Public International Law—*

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|--|----|-----------|
| 1. Nature, History, Sources, International Persons, Objects of Law of Nations, International Transactions, Ambassadors and other Diplomatic Representatives and their privileges, International Organisation | .. | One paper |
| 2. Settlement of Differences, including Conciliation, Arbitration, etc., Retortion, Reprisals, Blockade, Intervention, etc., Neutrality and War, Visitation, Capture, Search, etc. | .. | One paper |

(g) *Private International Law—*

- | | | |
|--|----|-----------|
| 1. History, Nature of Subject, General Principles, Jurisdiction, Obligations (Capacity, Contract and Torts) | .. | One paper |
| 2. Domicile, Family Law (including Marriage, Divorce, Legitimacy), Property, and Foreign Judgments and Procedure | .. | One paper |

(h) *Jurisprudence—*

- | | | |
|---|----|-----------|
| 1. Philosophical and Sociological | .. | One paper |
| 2. Theory of Legislation and Interpretation of Statutes | .. | One paper |

(i) *Roman Law*—

- | | | |
|-----------------------------------|----|-----------|
| 1. History and General Principles | .. | One paper |
| 2. Select Topics | .. | One paper |

(j) *Constitutional Law*—

- | | | |
|--|----|-----------|
| 1. Federal Constitutions | .. | One paper |
| 2. Select Constitutions (other than the Federal) | .. | One paper |

(k) *Crimes and Criminology*—

- | | | |
|------------------|----|-----------|
| 1. Law of Crimes | . | One paper |
| 2. Criminology | .. | One paper |

(l) *Transfer of Property and Equity*—

- | | | |
|---|----|-----------|
| 1. Transfer of Property (excluding Mortgages) | .. | One paper |
| 2. History of Equity, General Principles, Trusts, Specific Performance, Injunction, Mistakes, Misrepresentation and Fraud (Actual and Constructive) and Mortgages | .. | One paper |

Note.—1. Candidates will have to obtain the Dean's sanction for the choice of subjects.

2. The Select topics for the various papers will be prescribed by the Faculty of Law from time to time.

5. (i) The candidate must ordinarily submit his dissertation on or before the 15th of April, and may, in special cases, be permitted by the Dean to submit the same not later than the 1st of August, following the LL.M. Part II Examination in which he was declared eligible.

In case the dissertation is not submitted as aforesaid, the candidate may be permitted to submit the same on or before the 15th April or with the permission of the Dean on or before the 15th of August of the following two years, provided he has been placed in the Register of ex-students in accordance with the provisions relating thereto.

The topic of the dissertation which is not submitted within the period as aforesaid may be assigned to another candidate who may wish to write upon the same.

(ii) The candidate will be eligible to submit his dissertation only when he has secured 50 per cent marks in the written examination in the subject offered by him.

(iii) A candidate who fails to pass in the dissertation may, by the Faculty of Law—

- (a) be allowed to revise and resubmit the same or
- (b) be required to submit a fresh dissertation.

(iv) A candidate for the LL.M. Examination may be required to submit for a *viva voce* examination on the subject of his dissertation, if the examiner of the dissertation so likes. Marks for the dissertation will be awarded after such *viva voce* examination, if any.

(v) (1) Each of the papers to be set for the LL.M. Part I or LL.M. Part II Examination shall be three hours' duration and carry the maximum of 100 marks.

(2) The dissertation carries the maximum of 400 marks.

SPECIAL SUBJECTS EXAMINATION IN LAW

1. A candidate who has passed the LL.B. Final or a higher examination in Law of the University of Delhi, may, with the permission of the Dean, be permitted to enrol himself for instruction in not more than two of the following subjects, and to appear in an examination in either or both of these branches of study :—

- (a) The Law relating to Land Tenures, Rent and Revenue of any State in India.
- (b) Law of Taxation.
- (c) Labour Law.
- (d) Company Law.

Provided, however, that a candidate who is studying for the Certificate of Proficiency (Punjab) in Law Examination shall not be permitted to pursue a course of study in more than one of the subjects mentioned above.

(2) One paper shall be set on each of the subjects and the minimum pass marks in each shall be 40 per cent.

(3) The paper shall be identical with that prescribed for the LL.B. Final Examination candidates.

(4) A separate certificate shall be issued to a candidate in respect of each paper in which he has passed.

CERTIFICATE OF PROFICIENCY EXAMINATION (PUNJAB)

1. The course of study for examination extends over one academic year.

2. The following are the subjects for the examination, namely,—

- (i) Limitation and Prescription.
- (ii) Minor Acts (Registration Act, Guardian and Wards Act, Majority Act, Stamp Act, Court Fees Act, and Suits Valuation Act.)
- (iii) Pleadings and Conveyancing.
- (iv) Law of Arbitration and Insolvency.

(v) and (vi) Any two of the following with the previous permission of the Dean—

- (a) Interpretation of Statutes and Principles of Legislation.
- (b) Public International Law or Private International Law.
whichever the candidate has not previously passed in.
- (c) Labour Law.
- (d) Law of Taxation.
- (e) Company Law.
- (f) Indian Succession Act, and the Law relating to Marriage and Divorce (applicable to non-Hindus and non-Muslims).
- (g) Punjab Land Laws and Customary Law.

English is the medium of examination in all the papers excepting in Pleading and Conveyancing (Paper III) in which paper a candidate has the option of writing his answers in English, Hindi or Urdu. A candidate wishing to answer Paper III in English, Hindi or Urdu must inform the Dean of the Faculty of Law not later than the 15th August.

3. A course of lectures on Legal Ethics is provided, of which at least 75 per cent have to be attended by every student. No examination by the University is held in this subject but attendance at the course of lectures is a condition precedent to the admission to the examination.

DOCTORATE OF PHILOSOPHY (PH.D.)

The Degree of Doctor of Philosophy may be granted in any Faculty of the University. Subject to the general guidance of the Academic Council post-graduate research studies in the University is organised by the Boards of Research Studies, viz.: one each for the Humanities, for Sciences, for Law and for the Medical Sciences, respectively. Each Board shall consist of the Vice-Chancellor, the Deans and the Heads of the Departments concerned, with power to co-opt two other members in cases of Research Boards for the Humanities and Sciences and three in the cases of the Boards of Research Studies for Law and Medical Sciences. The co-opted members shall hold office for a period of two years. A candidate for admission to the course for the Degree of Doctor of Philosophy must have obtained a recognised Master's Degree in the subject in which the candidate wishes to pursue a course of research or in a subject allied thereto. Every application for admission is to be recommended by the Head of the Department concerned who will also recommend the name of the Supervisor to guide the applicant. Candidates may be enrolled at the beginning of any term in the academic year and every candidate shall pursue as a student of the University a course of research for not less than six academic terms. Every candidate should pursue his research in Delhi but may be permitted by the Board, on the recommendation of the Supervisor to be absent from Delhi for ordinarily not more than three academic terms on the ground

that it is in the interest of his research that he should work elsewhere. No candidate shall undertake any employment during the period of his study without the permission of the Board. Candidates are not permitted to submit their theses for the degree unless their supervisors are satisfied that the theses presented are worthy of consideration for the award of the Ph.D. Degree. The reports of the examiners of a thesis are placed before a Committee. It is the function of the Committee after considering the reports of the examiners to make a recommendation to the Academic Council.

BACHELOR OF EDUCATION (B.Ed.)

The course extends over a period of one academic year after graduation. The course of study and examination comprise the following:—

Part A (Theory)—

Paper I—Principles of Education.

Paper II—Educational Psychology.

Paper III—Modern Indian Education—

(a) Its development and its recent History.

(b) The Organisation and Practice.

Paper IV—Methods of Teaching—Selected Scheme Subjects. Any two of the following:

(a) Mother Tongue.

(b) English.

(c) Mathematics.

(d) Science.

(e) History.

(f) Geography.

(g) Civics.

(h) Economics.

(i) Physiology and Hygiene.

(j) Home Science.

(k) Commerce.

Paper V—Any one of the following:

(a) Social Education.

(b) Physical Education.

(c) Early Childhood Education.

(d) History of Education in India.

(e) Audio Visual Education.

(f) School Library Organisation.

(g) Basic Education.

Part B (Practice)—

Paper I—Practical Skill in Teaching.

Paper II—Sessional Practical Work.

The minimum number of marks required to pass the examination is 35 per cent in each of the papers in Part A and 45 per cent in Part B and 40 per cent in the aggregate. Those who obtain 60 per cent of the aggregate marks or more in Theory and Practical combined are declared to have passed with Distinction.

Any candidate who has obtained not less than 40 per cent of the aggregate marks, but has failed in one subject only under Part A or Part B, of the examination, obtaining not less than twenty-five per cent in that subject under Part A or Part B as the case may be, is admitted to a compartmental examination in that subject under Part A or in Part B in that year.

MASTER OF EDUCATION (M.Ed.)

Minimum qualifications for admission to the course are B Ed. Degree with at least three years' teaching experience as whole-time teacher in any recognised educational institution. Qualification regarding teaching experience may be waived in the case of those candidates who have obtained a I Class or Distinction in the B.Ed. Examination or the preceding degree examination or who have had adequate research experience.

The course extends over one academic year. The examination consists of five papers, viz.:

Paper I—Philosophy and Sociology of Education.

Paper II—Advanced Educational Psychology.

Paper III—Techniques of Research in Education and Educational Statistics.

Papers IV & V—Any two of the following:—

- (a) Educational Administration.
- (b) Mental Hygiene and Child Guidance.
- (c) Experimental Education.
- (d) Teacher Education.
- (e) Educational and Vocational Guidance.
- (f) Comparative Education.
- (g) History of Problems of Indian Education.
- (h) Principles of Curriculum Construction.

Report on Practical Work or an essay on a subject connected, with one of the papers offered by the candidate and selected with the approval of the Head of the Department.

A candidate must obtain 50 per cent of the aggregate marks to qualify for a Pass and 65 per cent to secure Distinction.

DIPLOMA AND MASTER'S DEGREE COURSES IN LIBRARY SCIENCE

1. There shall be a course in Library Science leading to the Diploma in Library Science and the Degree of Master of Library Science.

2. The examination for the Diploma in Library Science shall be taken by (a) the candidates who have completed the Diploma Course, and (b) the candidates who have completed the first year of the Master's Degree course in Library Science and shall consist of:—

	Marks
(1) Library Classification (Theory)	(3 hours) 100
(2) Library Classification (Practical)	(3 hours) 100
(3) Library Catalogue (Theory)	(3 hours) 100
(4) Library Catalogue (Practical)	(3 hours) 100
(5) Bibliography, Book Selection and Reference Service	(3 hours) 100
(6) Library Organization	(3 hours) 100
(7) Library Administration	(3 hours) 100

Minimum number of marks required to pass the Diploma examination is 40 per cent in the aggregate. Those who obtain 60 per cent or more of the aggregate marks are declared to have passed with Distinction.

3. A candidate who secures not less than 50 per cent of the marks in the Diploma Examination of the University of Delhi shall be eligible for admission to the second year of the course for the Degree of Master of Library Science.

4. The examination held at the end of the second year of the course for the Degree of Master of Library Science shall consist of:—

	Marks
(1) Field of Knowledge and Methods of Investigation	(3 hours) 100
(2) Advanced Library Classification (Theory)	(3 hours) 100
(3) Advanced Library Catalogue (Theory)	(3 hours) 100
(4) Advanced Library Classification and Catalogue (Practical)	(3 hours) 100
(5) Advanced Library Organization	(3 hours) 100
(6) Academic Libraries, or Business Libraries or Archival Libraries	(3 hours) 100
(7) Records in Bibliography or Abstracting, and Reference Service and Administration	(3 hours) 100

DIPLOMA AND CERTIFICATE COURSES IN RUSSIAN

There is a two-year course for a Certificate of Proficiency in the Russian Language and a third year course for a Diploma in Russian Language and Literature.

Candidates for admission to the Certificate Course must have passed either the Intermediate Examination of an Indian University or the Higher Secondary Examination of the Board of Higher Secondary Education, Delhi, or an equivalent examination. The Examination for the Certificate

is written and oral. Written Paper I—Translation from Russian into English. Translation from English into Russian. Paper II—Composition. Oral—(a) Reading of unseen passages, (b) Conversation.

Candidates for the Diploma Course (a) must have obtained the Certificate of Proficiency in Russian Language of the Delhi University, (b) must have passed a Special Admission Examination in Russian conducted by the Head of Department of Russian (Distinction holders are exempted from the test). The course runs for one academic year. The examination in the Diploma Course consists of a written examination and a *viva voce* examination.

CERTIFICATE COURSES IN GERMAN, FRENCH AND ITALIAN

There is one year course each for a certificate in German, French and Italian. Candidates for admission to these courses must have passed either the Intermediate Examination of an Indian University or the Higher Secondary Examination of the Board of Higher Secondary Education, Delhi or an equivalent examination.

The paper shall consist of :

- (i) Questions on Practical Grammar.
- (ii) Translation of passages from foreign language into English.
- (iii) Translation of passages from English into foreign language.
- (iv) Composition—An essay of about 150 words on a subject to be selected out of three subjects, one of which should be a letter.

M.B., B.S. EXAMINATION

1. (i) Every candidate for admission to the M.B., B.S. Examination shall undergo a course of certified study extending over not less than five academic years between the date of commencement of the academic year of his study and the date of completion of the Final Examination provided not less than the last three years of the course shall have been spent in study and training which shall ordinarily be continuous, in the clinical group of subjects.

(ii) Every candidate, subsequent to passing the Final Examination, shall undergo a period of certified practical training for twelve months in recognised medical institutions in the form of rotatory interneeship under medical officers recognised by the University as teachers for the purpose. Such practical training shall include training for three months in public health work, part of which should be in the rural areas.

No candidate shall be qualified for admission to the Degree of M.B., B.S. until he has undergone the specified period of practical training.

II. There shall be three examinations :—

(i) First M.B., B.S. Examination to be held in April each year called the Annual Examination after a course of study for not less than two academic years.

(ii) Second M.B., B.S. Examination to be held in April each year, called the Annual Examination, after a course of study for not less than two academic years after passing the First M.B., B.S. Examination.

(iii) Final Examination to be held in April each year called the Annual Examination at the end of the fifth academic year.

The following papers are prescribed for each of the above Professional Examinations :—

FIRST M.B , B S. EXAMINATION

	Marks
<i>Anatomy—</i>	
One written paper of three hours	150
* Practical examination	75
Oral	75
<i>Physiology—</i>	
One written paper of three hours	150
* Practical examination	75
Oral	75

SECOND M.B., B.S. EXAMINATION

<i>Pathology and Bacteriology—</i>	
One written paper of three hours	150
* Practical examination	100
Oral	50
<i>Pharmacology including Pharmaco-therapeutics—</i>	
One written paper of three hours	150
* Practical examination	75
Oral	75
<i>Forensic Medicine including Toxicology—</i>	
One written paper of three hours	150
Oral	50

FINAL M.B., B.S. EXAMINATION

<i>Medicine including Paediatrics—</i>	
One written paper of three hours	150
* Clinical and Practical	150
Oral	100
<i>Surgery—</i>	
One written paper of three hours	150

* 10% of the total marks for the Practical and Oral/Clinical examination shall be reserved for the class work records of the candidate.

	Marks
* Clinical and Practical	150
Oral	100
<i>Midwifery and Gynaecology—</i>	
One written paper of three hours	150
* Clinical and Practical	150
Oral	100
<i>E. N. & T. and Ophthalmology—</i>	
One written paper of three hours	150
* Clinical and Practical	100
Oral	50
<i>Social and Preventive Medicine—</i>	
One written paper of three hours	150
Oral	50

ADMISSION TO THE MEDICAL COURSE

No candidate shall be eligible for admission to a course of study for the Medical Degree Course (M B , B.S) unless :—

- (i) he has completed the age of 17 years before the 1st October of the year of his admission to the course; and
- (ii) he has passed any of the following examinations :—
 - (a) Pre-Medical Examination of the University of Delhi ;
 - (b) The Intermediate Examination in Arts or Science of an Indian University with Physics, Chemistry (including Organic Chemistry) and Biology as subjects provided that the examination included a practical test in each of these subjects; or
 - (c) An examination of a Board or other Body recognised by the University as equivalent thereto.

The marks required for passing the examination shall be those as given below :—

<i>Name of Examination.</i>	<i>Minimum marks required for passing the Examination.</i>	<i>Classification of successful candidates I Div. , II Div. or Distinction.</i>
M.B., B.S. I, II and Final Examinations.	In each subject, 50 per cent in written; 50 per cent in Practical and/or Oral together; 50 per cent in Clinical (in Clinical subjects); and 50 per cent in total.	75 per cent or more in the aggregate (Ist Div.), 60 per cent or above (IInd Div.). 80 per cent or more in a subject; Distinction in that subject.

No candidate who does not pass in all subjects of the examination at one time shall be declared to have passed with Distinction in any subject.

* 10% of the total marks for the Practical and Oral/Clinical examination shall be reserved for the class work records of the candidate.

COMPARTMENT

(1) Any candidate who has failed in one subject only in the First or Second M.B., B.S. Examination, but has secured not less than 40 per cent in the aggregate of that subject and not less than 50 per cent in the aggregate of the whole examination, may be admitted to a Compartment Examination in that subject to be held in July and if he secures the requisite percentage of marks in that subject at that examination, shall be declared to have passed the First or Second M.B., B.S. Examination, as the case may be. If he fails to pass in the Compartment Examination, he will be required to take the whole examination again after a further course of study for one academic year.

Provided that any candidate, who has failed in Forensic Medicine only in the Second M.B., B.S. Examination, may be permitted to proceed to the Course of Study for the Final Examination and be permitted to take the examination in Forensic Medicine at the time of the Final M.B., B.S. Examination and if he passes in that subject also in addition to the subjects for the Final M.B., B.S. Examination, he shall be declared to have passed the Final M.B., B.S. Examination.

(2) Any candidate for the Final M.B., B.S. Examination who has failed to obtain the requisite percentage of marks to pass the examination in not more than two subjects only, obtaining not less than 40 per cent in the aggregate of marks in those subjects, and 50 per cent in the aggregate of the whole examination, may be admitted to a Compartment Examination in those subjects only to be held in July and if successful, be declared to have passed the Final M.B., B.S. Examination.

DIPLOMA IN TUBERCULOUS DISEASES (D.T.D.)

Candidates seeking admission to the Diploma Course must be graduates in Medicine of recognised Universities, shown in Schedules I and II of the Indian Medical Council Act, who have been engaged in the practice of medicine for at least two years from the date of obtaining a qualification in Medicine, Surgery, and Midwifery or in hospital practice for one year as a member of the house staff of a hospital recognised by the University for the purpose. In special cases, Licentiates who hold or have held Commissions in the Indian Army Medical Corps may also be considered. Every candidate for admission to the Examination for the Diploma shall be required to produce certificate from the Officer-in-Charge of the course that he has pursued a special study of tuberculosis for a period of not less than nine months and attended to the course of instruction prescribed by the University in the institution recognised by the University for the purpose. The successful candidates are required to work as interneers in a recognised institution for a further period of three months.

DIPLOMA COURSES IN HINDI, URDU AND PANJABI

I. Every candidate seeking admission to the Examinations for the Diploma in Hindi, Urdu and Punjabi Language and Literature shall satisfy the following conditions :—

- (a) He must have passed the Higher Secondary Examination of the Board of Higher Secondary Education or the Qualifying Examination of the University or any other Examination of an Indian University equivalent thereto.
- (b) He must have pursued a regular course of study as hereinafter prescribed for two years after admission in any institution recognised by the University provided that the women candidates are allowed to appear for examination privately through the Women's Delegacy.

The written examination shall consist of six papers provided that the candidate for Hindi Examination shall be allowed the option of taking one additional paper in Sanskrit or Urdu, the candidate for Urdu, one additional paper in Persian or Hindi and the candidate for Panjabi, one additional paper in Hindi or Urdu.

The candidate will be allowed to offer in examination as an additional paper only that alternative subject which he had not already offered for his examination as specified above under clause I (a).

The marks of the additional paper shall not count towards aggregate. But the name of the language in which a candidate has qualified himself shall be mentioned in the certificate, if he obtains not less than 40 per cent in the optional paper.

II| The syllabus shall be as follows :—

HINDI

Paper I—Early Poetry (before Bharatendu)		100 marks
Paper II—Later Poetry		100 marks
Paper III—Prose and Drama		100 marks
Paper IV—(a) Prosody, Rhetorics and Principles of Criticism	50 marks	} 100 marks
(b) Bhasha Vijnana	50 marks	
Paper V—History of Hindi Literature		100 marks
Paper VI—(a) Composition	70 marks	} 100 marks
(b) Translation from English into Hindi	30 marks	

Additional Paper

SANSKRIT

(i) Text	70 marks	} 100 marks
(ii) Grammar	30 marks	

Note.—The Sanskrit paper will be of the standard not less than that of High School Examination of the Board of Higher Secondary Education, Delhi.

Or

URDU

(i) Urdu Literature	70 marks	} 100 marks
(ii) Outline of History of Urdu Literature	30 marks	

Note.—The Urdu paper will be of the standard of not less than that of High School Examination of the Board of Higher Secondary Education, Delhi.

URDU

Paper I—Early Prose and Poetry		100 marks
Paper II—Later Prose		100 marks
Paper III—Later Poetry		100 marks
Paper IV—(a) Linguistics	50 marks	} 100 marks
(b) Prosody, Rhetorics and Principles of Literary Criticism		
	50 marks	
Paper V—History of Urdu Literature		100 marks
Paper VI—(a) Composition	70 marks	} 100 marks
(b) Translation from English into Urdu	30 marks	

Additional Paper

PERSIAN

(a) Text	70 marks	} 100 marks
(b) Grammar	30 marks	

Note.—The Persian paper will be of the standard not less than that of High School Examination of the Board of Higher Secondary Education, Delhi.

Or

HINDI

(a) Hindi Literature	70 marks	} 100 marks
(b) Outline of History of Hindi Literature	30 marks	

Note.—The Hindi paper will be of the standard not less than that of High School Examination of the Board of Higher Secondary Education, Delhi.

PANJABI

Paper I—Poetry (Early and Later)		100 marks
Paper II—Drama		100 marks
Paper III—Prose		100 marks
Paper IV—(a) Linguistics	50 marks	} 100 marks
(b) Prosody, Rhetorics and Principles of Literary Criticism	50 marks	
Paper V—History of Panjabi Literature		100 marks
Paper VI—(a) Composition	70 marks	} 100 marks
(b) Translation from English into Panjabi	30 marks	

Additional paper in Hindi or Urdu

Note.—The Hindi or Urdu paper will be of the standard not less than that of High School Examination of the Board of Higher Secondary Education, Delhi.

HINDI

(a) Text	70 marks	} 100 marks
(b) Grammar	30 marks	

Or

URDU

(a) Literature	70 marks	} 100 marks
(b) Outline of History of Urdu Literature	30 marks	

FACULTY OF SOCIAL SCIENCES

ORDINANCE

The Diploma Examination in Economic Statistics

1. Every candidate seeking admission to the examination for Diploma in Economic Statistics shall have passed any one of the following examinations and possess the other qualifications mentioned hereunder:—

- (1) B.A. (Hons.) or B.Sc. (Hons.) Examination of the University of Delhi or an examination recognised as equivalent thereto

with Economics or Mathematics as the Main subject and securing not less than 50% of the marks in the aggregate.

(2) B.Com. Examination of the University of Delhi or the B.Com. Honours Examination of any other Indian University and securing not less than 50% of the marks in the aggregate.

(3) B.A. or B.Sc. Examination of the University of Delhi or an examination recognised as equivalent thereto, with Economics or Mathematics as an elective subject and securing not less than 60% of the marks in the aggregate.

2. Subject to the control and general supervision of the Academic Council, the instruction and routine in the Diploma Course in Economic Statistics shall be under the direction of the Dean of the Faculty of Social Sciences and the Head of the Department of Economics.

3. The duration of the course shall be two academic years.

4. English shall be the medium of instruction and examination.

5. There shall be a Preliminary (House) examination at the end of the first year in Mathematics or Economics, as the case may be. The non-Mathematics students shall appear in two papers in Mathematics in the Preliminary (House) examination and the non-Economics students in two papers in Economics.

6. The following shall be the papers prescribed for the Preliminary (House) examination :—

(A) *Economics*

Paper I—Economic Theory .. 100 marks

Paper II—Currency, Banking and International
Trade .. 100 marks

Or

(B) *Mathematics*

Paper I—Algebra and Trigonometry .. 100 marks

Paper II—Analytical Geometry and Calculus .. 100 marks

Note.—The promotion of the candidates to II Year shall be subject to the Head of the Department being satisfied regarding their performance in the House Examination.

7. The Final examination for the Diploma Course in Economic Statistics shall consist of the following papers :—

Paper I—Statistical Theory.

Paper II—Applied Statistics.

Paper III—Indian Official Statistics and Economic Intelligence.

Paper IV—Mathematical Economics and Econometrics.

Paper V—Current Economic Problems with special reference to Indian conditions.

Paper VI—Practical Paper I.

Paper VII—Practical Paper II (including Project Report)

and Viva Voce examination and practical record.

Note.—Project Report :

Every student shall be required to put in at least one month's actual field work in connection with his project work and prepare a report based on that to be submitted later on to the Board of Examiners.

8. Each written paper shall be of three hours' duration and shall carry one hundred marks. The Practical Paper I shall be of four hours' duration and shall carry one hundred marks and the Practical Paper II shall be of two hours' duration and shall carry one hundred marks including project report.

9. No candidate shall be considered to have pursued a regular course of study unless he is certified by the Head of the Department of Economics to have attended at least 75% of the lectures delivered and 75% of the tutorial classes held and to have otherwise pursued his studies to his satisfaction.

10. (a) The minimum number of marks required to pass the examination shall be 50% in the aggregate.

(b) A candidate obtaining 60% or more of the total number of marks shall be declared to have passed the examination with distinction.

COURSES OF READING

THE DIPLOMA COURSES IN ECONOMIC
STATISTICS

(Two-Year Course)

PRELIMINARY (HOUSE) EXAMINATION IN
MATHEMATICS*[For non-Mathematics students]***Paper I—ALGEBRA AND TRIGONOMETRY***Algebra—*

Ratio and proportion—Variation—Theory of Indices—Logarithms and their application to arithmetical computation—Simple, simultaneous and quadratic equations—Binomial theorem for a positive integral index—Exponential series—Elementary properties of determinants and their application to the solution of linear equations—Elementary idea of matrices—Simple cases of convergency and divergency—Summation of simple series.

Trigonometry—

Measurement of angles—Trigonometric functions and their relation to one another—Simple equation—Use of Trigonometric tables—Sine and cosine graphs—Addition and multiplication formulae—Expansion of $\cos \alpha$ and $\sin \alpha$ —De Moivre's Theorem—Hyperbolic functions.

Books recommended :—

Hall and Knight—Higher Algebra.

Loney—Trigonometry, Vol. I.

Allen—Mathematical Analysis.

Crum and Schumpeter—Mathematics for Economists.

Paper II—ANALYTICAL GEOMETRY AND CALCULUS*Analytical Geometry—*

The straight line, the circle, the parabola, the ellipse and the hyperbola treated with the help of rectangular co-ordinates

Calculus—

Differential Calculus: Definition of differential co-efficient. Differentiation of functions of a single variable. Successive differentiation. Taylor's and Maclaurin's Theorems and their simpler applications. Evaluation of functions which assume an indeterminate form. Differentiation of implicit functions. Partial differentiation. Maxima and Minima values of functions of one variable. Tangents, normals, asymptotes, curvature, singular points. Tracing of curves.

Integral Calculus: Integration of simple functions of a single variable. Integration of rational fractions. Integration by formulae of reduction.

Differential equations of the first order.

Elementary ideas on statics and dynamics.

Books recommended :—

Edwards—Elements of Differential and Integral Calculus.

Allen—Mathematical Analysis.

**PRELIMINARY (HOUSE) EXAMINATION IN
ECONOMICS**

[For non-Economics students]

Paper I—ECONOMIC THEORY

General introduction—What Economics is about (Income approach)—Process of production—Goods and services—Consumption and investment.

Factors of production—Labour, Capital, Land—Laws of production.

Problems of price fixation.

Social product—Social product and Social Income—Foreign payments and National Income—State and National Income—National Income and Economic progress.

Social accounting system (introductory).

Laws of distribution—Wage, Rent, Interest and Profits.

Books recommended:—

Hicks—Social Frame Work.

Pigou—Income.

Samuelson—Introduction to Economic Analysis.

Paper II—CURRENCY, BANKING AND INTERNATIONAL TRADE

Nature and function of money—Kinds of money including bank money—Money and prices—The Quantity Theory of Money—Effects of changes in prices—Index numbers—Monetary standards—Bimetallism, Gold standard with gold currency—Gold exchange standard—Gold bullion standard—Inconvertible paper currency standards—Foreign exchange—Inflation and deflation—The goal of monetary policy.

Banks and the creation of credit—Central Banking.

Principles of public expenditure—Effects on production and distribution—Maximum social benefit—Sources of public revenue—Principles of taxation—Public debt.

International trade—Advantages and disadvantages of international trade—The principles of comparative cost—Balance of trade and balance of accounts—Free trade and protection.

Books recommended:—

Crowther—An Introduction to Money.

Sayers—Banking.

Barroet Whale—International Trade.

Dalton—Public Finance.

FINAL EXAMINATION

THE DIPLOMA COURSE IN ECONOMIC STATISTICS

Paper I—THEORETICAL STATISTICS

General nature and scope of statistical methods—Collection, editing, classification and tabulation of data—Diagrammatic and graphic representation and interpretation of diagrams—Frequency distributions with continuous and discontinuous variates—Measures of central tendency and dispersion—Moments and coefficient—Skewness and Kurtosis.

Association of attributes—Partial and Illusory Association—Continuity and correlation tables.

Interpolation with equal and unequal intervals of the argument—Central difference formulae and applications.

Regression, correlation coefficient, correlation ratio—multiple and partial correlations—Rank correlation.

Elements of the theory of probability—Addition and multiplication theorems of probability—Mathematical expectation—Law of large numbers.

Three theoretical distributions: the Binomial, Poisson and Normal distribution—The normal probability integral and its uses.

Fundamentals of sampling theory—Errors of random sampling—Statistical inference—Chi. square test—The student's 't' test and the comparison of the means of two samples—Fisher's 'F' test—Analysis of variance—Randomised block—Latin square.

Large sample theory—Standard errors of moments, ratios and estimation of parameters of large samples.

Books recommended :—

Yule and Kendall—Introduction to the Theory of Statistics.

Weatherburn—Mathematical Statistics.

Aitken—Statistical Mathematics.

Hoel—Introduction to Mathematical Statistics.

Bowley—Elements of Statistics.

Mills—Statistical Methods.

Whittaker and Robinson—Calculus of Observations.

Snedecor—Statistical Methods.

Books for reference :—

Fisher—Statistical Methods for Research Workers.

Scarborough—Numerical Mathematical Analysis.

Paper II—APPLIED STATISTICS

Economic and business statistics—Construction and use of index numbers of cost of living, wholesale prices, Physical production, business activity, etc.—Analysis of time series—Correlation of time series—Business forecasting—Business budgeting—Time and motion studies, etc.—Computation of national income and construction of social accounts and cost studies.

Vital Statistics—Birth rates, Death rates—Gross and net reproduction rates—Construction of life tables—Growth of population—Census methods—Use of logistic census—Study of age bias in census returns.

General idea of quality control.

Sample surveys: The different steps in conducting a survey—Preparation of schedules—The technique of drawing a sample—Systematic, stratified, multi-stage and quota sampling—Use of random number—Cost and variance functions—Statistical surveys for the determination of area and yield of crops—Socio-economic surveys and family budget enquiries—Industrial surveys—Processing of survey data, etc.

Books recommended :—

- Riggelman & Frisbee—Business Statistics.
 Wheldon—Statistics as Applied to Business.
 Croxton & Cowden—Applied General Statistics.
 Allen & Bowley—Family Expenditure.
 Fisher—The Making of Index Numbers.
 Rao—National Income of British India, 1931-32.
 Rao—An Essay on National Income, 1925-29.
 Ruggle—National Income Accounts.
 National Income Committee—First Report of the National Income Committee.
 United Nations—Measurement of National Income and Construction of Social Accounts.
 United Nations—National Income Statistics, 1938-48.
 Pearl—Introduction to Medical Biometry and Statistics.
 Kuczyński—The Measurement of Population Growth.
 Government of India—Indian Census Reports.
 Frank Yates—Sampling Methods for Census and Surveys.
 Deming—Some Theory of Sampling.
 Boddington—Statistics and its Application to Commerce.
 United Nations—Sample Surveys of Current Interest.

Paper III—INDIAN OFFICIAL STATISTICS AND ECONOMIC INTELLIGENCE

Growth of official statistics in India—The system of statistical organisation.

Sources of economic and business statistics with special reference to India—Official statistics relating to agriculture, trade, transport, labour, prices, industry, vital statistics, national income, balance of payments, etc. —A knowledge of the defects in collection and compilation of these statistics and suggestion for improvement.

Critical study of the sample surveys conducted in India by official and non-official agencies.

International official statistics : their sources, methods of compilation, etc.

Economic intelligence—the use of Index numbers of cost of living, prices, currency in circulation, balance of payments and other economic indicators for the analysis and interpretation of current economic situation and forecasting. National budgeting.

Books recommended :—

- Bowley-Robertson Report on a Scheme for an Economic Census of India.

- Indian Economic Enquiry Committee Report.
- Proceeding of the International Statistical Conferences (Relevant papers).
- Guide to Current Official Statistics, Vols. I, II and III.
- Report of the National Income Committee.
- Annual Abstract of Statistics.
- Monthly or Quarterly Statistical Abstracts of Government of India and State Governments.
- Indian Census Reports.
- Relevant Papers in the J. R. S. S.
- Relevant Papers in the Saukhya—Indian Journal of the Society of Agricultural Statistics.
- Sample Surveys for the Estimation of Yields in India (Indian Council of Agricultural Research).
- Report of the Committee on Co-ordination of Agricultural Statistics (Directorate of Economics and Statistics, Ministry of Food and Agriculture, Government of India).
- Working class Family Budget Studies conducted by Labour Bureau, Government of India.
- Report on the Standard of Living of Middle Class Government Servants in India (Office of the Economic Adviser to the Government of India, Ministry of Commerce and Industry).
- Farm Accounts (Punjab Board of Economic Enquiry).
- International Statistical Year Book—(U.N.)
- Monthly Bulletin of Statistics—(U.N.)
- Bulletin of the Reserve Bank of India.
- Review of the Trade of India.
- Indian Labour Gazette.
- World Economic Survey Reports.
- White Paper on National Income—(U.K.)
- Report of the Council of Economic Advisers—(U.S.A.)

Paper IV—MATHEMATICAL ECONOMICS AND ECONOMETRICS

1. General introduction : application of mathematical and statistical methods in economics.
2. Consumer behaviour, indifference maps and utility function, equilibrium of exchange, effects of changes in income and prices, complementarity and substitution, derivation of Engel's curves.
3. Behaviour of producers, production plans, conditions of equilibrium.
4. Models of a growing economic sequence, Tinbergen's arrow diagrams, models given by differential and difference equations,

exogenous and endogenous models, cyclical and monotonic sequences, study of parameters like investment rate, capital coefficient, etc.

5. Mathematical background of income analysis, Keynesian and Leontief matrices of transactions in an economy, elementary notions.
6. Statistical study of distribution of incomes.
7. Statistical laws of supply, demand and prices Elasticities.
8. Estimation of parameters in econometric models. Structural relationship between several economic variables, behaviouristic and definitional equations.
9. Economic calculations in a socialised economy.

Books recommended :—

Allen—Mathematical Analysis for Economists.

Allen and Bowley—Family Expenditure.

Bowley—Mathematical Groundwork of Economics.

Davis—Econometrics.

Davis—Analysis of Time Series.

Hicks—Value and Capital.

Hicks—Trade Cycle.

Stone—Role of Measurement in Economics.

Klein—Fluctuations in American Economy.

Schelling—National Income Behaviour.

Schultz—Statistical Study of Demand.

Von Mises and others—Collectivist Economic Planning.

Tinbergen—Econometrics.

Tintnev—Econometrics.

Paper V—CURRENT ECONOMIC PROBLEMS (*with special reference to Indian conditions*)

Food and Agriculture, Industry and Labour, Currency and prices, Trade and balance of payments, Economic controls, The Five-Year Plan.

Trends in world trade, World food situation, International lending and development programmes in under-developed countries.

Books recommended :—

Vakil—Economic Consequences of Divided India.

Wadia and Merchant—Our Economic Problem.

Anjaria and Nanavati—Indian Rural Problem.

Report on Currency and Finance (Reserve Bank of India).

Report of the Planning Commission.

Report of the Famine Commission, 1945.

Report of the Indian Fiscal Commission, 1949 (Relevant portions).

United Nations—World Economic Survey Reports.

United Nations—E.C.A.F.E. Reports.

Paper VI—PRACTICAL PAPER I

Frequency distributions, averages, measures of dispersion, calculation of partial and multiple correlation, regression, equation, etc.

Curve fitting by the method of least squares, fitting of normal and simple skew frequency curves including Paroto's Lorenz's and Logistic curves.

Interpolation.

Analysis of time series.

Analysis of variance, Tests of goodness of fit.

Calculation of gross and net reproduction rates.

Books recommended :—

Pearson—Tracts for Computers.

Pearson—Tables for Statisticians and Biometricians.

Fisher and Yates—Statistical Tables for Biological, Medical and Agricultural Research.

Paper VII—PRACTICAL PAPER II

Part I

Preparation of questionnaires and schedules. 40 marks

Collection of primary data—Scrutiny of primary data and tabulated results.

Computational practice.

Organisation of statistical processing.

Costing and budgeting.

Preparation of Statistical Reports.

Part II

Report based on project work .. 60 marks

100

VIVA VOCE .. 50 marks

PRACTICAL RECORD .. 50 marks

100

10. The Faculty considered the following suggestion of the Committee of Courses and Studies in Economics and decided as follows:—

(1) that the schedule of papers for the Diploma Course in Economic Statistics be modified below :

Existing Papers VI & VII in clause 7 of the Ordinance to be substituted by the following :

Paper VI—Practical Paper I

Written	..	75 marks
Practical Record Work	..	25 marks
		<hr/>
		100

Paper VII—Practical Paper II

Part I (Written)	.	75 marks
Practical Record Work	..	25 marks
		<hr/>
		100

Paper VIII—Project Reports and *Viva-Voce*

Report based on Project work	..	50 marks
<i>Viva-Voce</i>	..	50 marks
		<hr/>
		100

The above change was to take effect from 1956 Exam.

DEPARTMENT OF AFRICAN STUDIES

The first Diploma Course will begin on July 18th, 1955. Applications for admission to the Course from students should reach the School of African Studies not later than July 10th, 1955. An application form is attached.

The School of African Studies has been established in the University of Delhi to organize instruction for a Diploma Course extending over a period of two years and to provide facilities for research in African Subjects leading to the Ph.D. Degree of Delhi University.

The Diploma Course is open to persons who have passed the B.A. or B.Sc. Examination of the University of Delhi or examination recognised as equivalent thereto. There is provision for the admission of about 30 students a year including students from overseas. A limited number of scholarships is available to overseas students. Further particulars of

these and details of the Diploma Course may be obtained from the School of African Studies or from the respective Indian Embassies/Commissions.

The following are the subjects for the Diploma Course:—

- Paper I—Systematic and Regional Geography of Africa.
- Paper II—African Cultural Anthropology.
- Paper III—African History with special reference to the development of colonial policies.
- Paper IV—Governments and Politics in Africa.
- Paper V—Economic Development in Africa with special reference to the modern period.
- Paper VI—Political and Cultural History of India (with special reference to the development of the present Constitution).

Paper VII—*Any of the following:—*

- (a) Geography and anthropology of an African region (to be defined from time to time).
- (b) U.N. and other international activities in Africa.
- (c) Economic and Social development of India since 1857.
- (d) African land Systems.
- (e) Ethnology of India.
- (f) Geopolitics of Africa.

Paper VIII—Language (Swahili/Hausa) or an Indian Language.

The Staff consists of the Head of the School, five Readers and two African language lecturers who, in addition to delivering lectures, will conduct frequent tutorials and arrange for seminars. From time to time eminent Africanists from other countries will be invited to the School to deliver series of lectures in their special fields. Arrangements will be made where necessary to enable Readers and research fellows to visit Africa.

A considerable library of books and periodicals dealing with Africa is being assembled and a museum is also planned.

The fees payable are as follows:—

(i) Admission fee	..	Rs. 10
(ii) Tuition fee	..	Rs. 18 p.m.
(iii) Enrolment fee	..	Rs. 5 (Payable at time of admission to the University)
(iv) Special fee	..	Rs. 2 annually
(v) Examination fee	..	Rs. 60

Overseas students coming to Delhi will find that they require an income of about Rs. 200 p.m. to meet normal expenses and to maintain fairly simple but adequate standard of living, and to have sufficient funds left to spend on their journeys and vacations. Accommodation can be provided in one of the University Halls at a rental of from Rs. 25 a month. Total expenses in these Halls amount to about Rs. 125 monthly. The University authorities do all in their power to make overseas students feel at home and the Indian Council of Cultural Relations also gives all possible assistance in the matter of information, guidance and arrangements for vacations, etc.

The Delhi winter is dry and cool with temperatures ranging between 32 and 75. April to June are very hot months with occasional dust-storms and temperatures ranging between 80 and 115. July and August are warm and wet and September is very sultry. A number of cool hill stations are within easy reach of Delhi and many students visit them during the hot weather vacation.

EXAMINATION FEES

	Rs.
Qualifying, Admission ..	15
Pre-Medical ..	30
B.A. ..	35
B.Sc. ..	40
B.A. (Hons.) ..	55
B.Com. ..	45
B.Sc. (Hons.) ..	55
B.A. (Hons.) and B.Sc. (Hons.) for failed candidates reappearing in Subsidiary Subject (per subject)	10
M.A. (Preliminary) ..	10
M.A. (Previous) (Math.) ..	30
M.A. (Final) (Math.) ..	30
M.A. (Final) and M.Com. ..	60
M.Sc. (Previous) ..	60
M.Sc. (Final) ..	60
Dip. in Library Science ..	35
M.A. Library Science ..	60
LL.B. (Previous) ..	30
LL.B. (Final) ..	55
Certificate of Proficiency in Law ..	50
B.C.L. Part I ..	30
B.C.L. Part II ..	55
B.C.L. Part III ..	55

LL.M. I	..	50
LL.M. II	..	50
B.Ed.	..	55
M.Ed.	..	75
Certificate of Proficiency in Russian	..	15
Diploma in Russian	..	35
Certificate Examination in French	..	
German and Italian	..	15
D.T.D.	..	100
M.B., B.S. 1st Exam.	..	40
M.B., B.S. 2nd Exam.	..	20
M.B., B.S. 3rd Exam.	..	40
M.B., B.S. Final	..	60
B.Sc. (Hons.) (Ag.) I year	..	20
B.Sc. (Hons.) (Ag.) II year	..	25
B.Sc. (Hons.) (Ag.) III year	..	
B.Sc. (Hons.) Nursing Part I	..	25
B.Sc. (Hons.) Nursing Part II	..	25
B.Sc. (Hons.) Nursing Part III	..	40
	for whole	40
	for each part	..

TUITION FEES

	Rs.
Degree Classes	.. 15
Post-graduate Classes	.. 18

GAUHATI UNIVERSITY

The University came into existence from the 1st January, 1948, and Act XVII of 1947. It is an affiliating, teaching and residential University with jurisdiction over all the Schools and Colleges in the Province of Assam which were formerly affiliated to the University of Calcutta. Under the Gauhati University Act, 1947, the Government of Assam shall contribute annually not less than five lakhs of Rupees to meet the recurring charges of the University.

The Constituent Bodies of the University are the Court, the Executive Council and the Academic Council.

The Court consists of ex-officio, elected and nominated members. The Court has the power of approving or rejecting the Draft Statutes placed before it by the Executive Council, of considering and cancelling Ordinances, and of passing resolutions on the Annual Report, the Annual Accounts and the Financial Estimates. The Chancellor is the ex-officio President of the Court.

The Executive Council consists of the Vice-Chancellor, the Director of Public Instruction, three Deans of the faculties, two Principals, the Registrar, the Treasurer, one member of the Court, one member of the Academic Council two persons nominated by the Chancellor and three other members. The Vice-Chancellor is the ex-officio Chairman of the Executive Council. The Executive Council is responsible for the administration of the University and the conduct of the University Examinations. It holds, controls and administers the property and funds of the University.

The Academic Council is the academic body of the University with powers to recommend the number, qualifications and emoluments of University teachers and promote research and higher academic teaching within the University.

OFFICERS AND STAFF OF THE UNIVERSITY

Chancellor :

The Governor of Assam.

Vice-Chancellor :

Dr. S. K. Bhuyan, M.A., B.L., (Cal), Ph.D., D.Litt (Lond).

Registrar :

Mr. Phanidhar Datta, M.A., B.L. ..

Treasurer :

Mr. Kailash Chandra Bhattacharyya, M.A.

Deputy Registrar :

Mr. Chdananda Das, M.A., B.L.

Assistant Registrar :

Mr. R. K. Barua, M.Sc.

The Chancellor is the head and the Vice-Chancellor is the principal executive and academic officer of the University.

DEANS OF THE FACULTIES

<i>Arts</i>	—	Dr. B. K. Barua, M.A., B.L., Ph.D.
<i>Commerce</i>	—	Dr. D. C. Sabhmarwal, M.A., B.Com., A.C.I.S. (Lond.)
<i>Medicine</i>	--	Dr. B. Banerji, M.B.
<i>Science</i>	—	Dr. H. K. Barua, M.Sc. Ph.D. (Cantab.).
<i>Agriculture</i>	—	Dr. M. C. Das, M.Sc. Ph.D.
<i>Law</i>	—	Vacant.

The teaching work of the University is carried on in the Post-graduate, Law, under graduates, and Teacher Training Departments. undergraduate classes other than B.Com & B.Com. are held only in such subjects as are not taught in any of the affiliated Colleges. A Diploma course in Secretarial Practice is also provided. B.A Honours classes in Assamese and Botany are held at the University. The Secretary of the University classes acts as the Administrative Officer.

POST-GRADUATE DEPARTMENTS

Six Professors, seven Readers and fifty three Lecturers have been appointed.

<i>Mathematics</i>	—	Professor and Head of the Department —
<i>and</i>		Prof. V. D. Thawani, M.A. (Cantab).
<i>Statistics</i>		
<i>Statistics</i>	—	Reader — Dr. J. Medhi, M.Sc., Sc.D.
<i>History</i>	—	Reader (Vacant)
<i>Philosophy</i>	—	Reader — Dr. R. R. Sharma, M.A., Ph.D.
<i>Economics</i>	—	Reader — Dr. P. C. Thomas, M.A., Ph.D.
<i>Commerce</i>	—	Professor and Head of the Department —
		Mr. D. C. Sabharwal, M.A. (Glass)
		Reader — (Vacant)
<i>Assamese</i>		Dr. B. K. Barua, M.A., B.L., Ph.D.
	—	Professor and Head of the Department —
		Readers: Dr. M. Neog, M.A., Ph.D.
		Dr. S. Sarma, M.A., Ph.D.
<i>Botany</i>	—	Professor and Head of the Department —
		Dr. H. K. Barua, M.Sc., Ph.D. (Cantab).
		Reader — Dr. N. Das, M.Sc., Ph.D. (Lond).

<i>Anthropology</i>	—	Lecturer-in-charge of the Department — Mr. M. C. Goswami, M.Sc., B.T., M.Litt.
<i>Education</i>	—	Reader Dr. D. C. Das Gupta, M.A., Ed.D., Mr. B. C. Kar, M.A., B.T., M.A. (Ed.) (Lond) and Dr. N. Mukherji, M.Sc., Ph.D. (Lond.)
<i>English</i>	—	Professor and Head of the Department — Dr. S. Ganguli, M.A., Ph.D.
<i>Chemistry</i>	—	Professor and Head of the Department — Dr. B. Sanjiba Rao, M.A., Ph.D., D.Sc. (Lond.) F.N.I., F.A.Sc.
<i>Physics</i>	—	Reader and Head of the Department — Dr. P. C. Mahanta, M.Sc., Ph.D.
<i>Geology</i>	—	Reader and Head of the Department — Dr. J. M. Chaudhury, M.Sc., Ph.D.

LAW DEPARTMENT

Principal of the University Law College — Mr. J. Bora, B.L.

UNDER-GRADUATE DEPARTMENTS

<i>Education</i>	—	One Lecturer
<i>Anthropology</i>	—	Two Lecturers and one Demonstrator
<i>Statistics</i>	—	Four Lecturers
<i>Geography</i>	—	Three Lecturers
<i>Geology</i>	—	Two Lecturers and one Demonstrator
<i>Labour Economics</i>	—	One Lecturer

Some of the Post-graduate teachers in Commerce and Education serve as part-time Lecturers in the Under-graduate Departments of Commerce and Education respectively. There are also additional Lecturers.

There are at present 537 students in the Post-graduate and 512 students in the Under-graduate classes. There are 239 students in the Law College and 82 students in the Teachers' Training classes.

TEACHERS' TRAINING DEPARTMENT

Staff :

Three Readers in Education.
One Lecturer in Geography.
One Lecturer in Hygiene.
One Lecturer in English.
One Lecturer in Bengali and Sanskrit.
Two Demonstrators.

SCALES OF PAY

<i>Professor</i>	—	Rs. 700-50/2-1,000/-	} 10 per cent Dearness allowance and House allowance Rs. 50/- P. M. with P. F. benefits.
<i>Reader</i>	—	Rs. 500-50/2-800/-	
<i>Lecturer</i>	—	Rs. 250-40/2-450-50/2-600	

BUDGET AND PROVIDENT FUND

The total funds of the University at the end of the financial year 1954-55 amounted to Rs. 18,76,714-13-0. As against this there was an expenditure of Rs. 15,00,147-0-0.

Every whole-time employee of the University holding a substantive appointment has to contribute to the University Provident Fund. Subscription to the fund is 6½ per cent on the salaries of the depositors deducted monthly from their salaries. The University makes a monthly contribution of the same value for each subscriber.

STIPENDS

Scholarships of Rs. 30, Rs. 35/- and Rs. 50/- p.m. are awarded to the students who stand first in the Matriculation, Intermediate and B.A. B.Sc. and B.Com. Examination and special prizes of Rs. 75/-, Rs. 100/-, Rs. 75 and Rs. 150 are awarded to the students standing first in I.Sc. (Agri.), B.Sc. (Agri.), First and Final M.B.B.S. Examination respectively.

AFFILIATED COLLEGES

Name of College

Cotton College, Gauhati (I.A., I.Sc., B.A. & B.Sc.)	U. K. Dutta, M.Sc.
Handique Girls' College, Gauhati (I. A. and B.A.)	Mrs. R. B. Das, M.A.
Assam Medical College, Dibrugarh (M.B.B.S.)	Dr. B. Banerji, M.B.
Assam Agricultural College, Jorhat (I.Sc. (Agri.), B.Sc. (Agri.))	Dr. M. C. Das, M.Sc., Ph.D.
J. B. College, Jorhat (I.A., I.Sc., I. Com., B.A., B.Sc., & B.Com.)	Mr. G. Datta, M.A., B.L.
H. S. K. College, Dibrugarh (I.A., I.Sc., I.Com., B.A. and B.Com.)	Mr. J. R. Basu, M.A.
Nowgong College, Nowgong (I.A., I.Sc., I.Com. and B.A.)	Mr. J. Sarma, M.A.
Darrang College, Tezpur (I.A., I.Sc., and B.A.)	Mr. A. C. Roy, M.A., B.T.
M. C. College, Barpeta (I.A. and B.A.)	Mr. R. Das, M.Sc.
B. N. College, Dhubri (I.A. and B.A.)	Mr. P. Gogoi, M.A.
Gurucharan College, Silchar (I.A., I.Sc., B.Com. and B.A.)	Mr. J. K. Chowdhury, M.A., B.L. (Cal.), B.A. (Oxon)
Karimganj College, Karimganj (I.A., I.Sc., I.Com., B.A. and B.Sc.)	Mr. P. C. Bhattacharya, M.Sc.

St. Edmund's College, Shillong (I.A., I.Sc., B.A. and B.T.)	Rev. Brother E. X. Leonard, M.A.
St. Anthony's College, Shillong (I.A., I.Sc., I.Com., B.A., B.Sc. and B.Com)	Rev. D. J. Wollaston, S.D.B., D.D.
St. Mary's College, Shillong (I.A. and B.A.)	Mother M. De Sales.
Nalbari College, Nalbari (I.A. and B.A.)	Mr. T. N. Goswami, M.A.
D. M. College, Imphal, Manipur (I.A., I.Sc., B.A. and B.Sc.)	Mr. S. N. Kaul, M.A.
B. Barooah College, Gauhati (I.A. and B.A.)	Mr. H. K. Barua, M.A.
Lady Keane Girls' College, Shillong (I.A.)	Miss U. Bhattacharya, M.A.
Sibsagar College, Sibsagar (I.A. and B.A.)	
D. C. Barua Girls' College, Jorhat (I.A.)	Mr. D. Goswami, M.A., B.L.

COURSES OF STUDIES

<i>Degrees, Examination and Duration</i>	<i>Subjects</i>	<i>Entrance qualifications</i>
Intermediate Two years	(i) English, (ii) A recognised Vernacular (Assamese, Bengali, Hindi, Urdu, Nepali, Khasi, Manipuri, Gurumukhi) and (iii) Any three of the following subjects:— Sanskrit, Arabic, Persian, French, Assamese 2nd Language, Hindi 2nd Language, Urdu 2nd Language, History, Logic, Mathematics, Civics, Commercial Geography, Commercial Arithmetic and Elements of Book-keeping.	Matriculation or its recognised equivalent
Intermediate Two years Science	(i) English, (ii) A recognised Vernacular and (iii) Any three of the following subjects:—	

*Degrees, Examination
and Duration*

Subjects

*Entrance
qualifications*

Mathematics, Physics, Chemistry, Geography, Botany, Biology, Zoology and Anthropology.

Three papers in English and one paper in Vernacular for both I.A. and I.Sc. and two papers in each of the optional subjects including practicals in the Science subjects.

Intermediate Two years
Science (Agricultural)

(i) Group I: Agronomy (ii) Group II: Botany, Elementary Zoology; (iii) Group III: Chemistry, Soils; (iv) Group IV: Animal Husbandry, Veterinary Science; (v) Group V: Physics and Climatology, Mathematics; (vi) Group VI: English and Indian Languages.

Matriculation or its recognised equivalent

Intermediate Two years
Commerce

Compulsory:

(i) English, (ii) Vernacular, (iii) Commercial Correspondence, (iv) Commercial Arithmetic, (v) Book-keeping, (vi) Commercial Geography, (vii) Elementary Economics, (viii) Salesmanship and Publicity, (ix) Business Methods, (x) Forms of Economic Organization.

Optional: Not more than two of the following subjects:—

(i) Insurance, (ii) Mathematics, (iii) Elements of Civics and Indian Administration.

<i>Degrees, Examination and Duration</i>	<i>Subjects</i>	<i>Entrance qualifications</i>
B.A. (Pass and Honours) Two Years	(i) English, (ii) A recognised Vernacular and (iii) Two of the following subjects :— Anthropology, Education, Statistics, History, Philosophy, Economics, Sanskrit, Persian, Arabic, Assamese 2nd Language, Bengali 2nd Language, and Mathematics. Three examination papers in each of the above subjects except in the Vernacular for the Pass Course. Three additional papers in one of the subjects for the Honours Course.	I.A., I.Sc.
B.Sc. (Pass and Hons.) Two Years	Any three of the following subjects : Anthropology, Statistics, Mathematics, Chemistry, Botany, Geography, Geology, Zoology and Physics for the Pass Course. Three examination papers including practicals in each subject for the Pass Course. Three additional papers including practicals in one of the subjects, for the Honours Course.	I.Sc.
B.Sc. (Agriculture) Two Years	(i) Agronomy : (a) Soil Management, (b) Special Crops, (c) Farm Management ;	I.Sc. (Agri.)

<i>Degrees, and Duration</i>	<i>Subjects</i>	<i>Entrance qualification</i>
	(ii) Agricultural Botany : (a) Plant Physiology, (b) Genetics, Crop-breeding, Botany of Crop Plants ;	
	(iii) Agricultural Chemis- try : (a) Soil Science, (b) Physiological and Plant Che- mistry ;	
	(iv) Dairy Farming and Dairying ;	
	(v) Entomology ;	
	(vi) Plant Pathology and Bacteriology ;	
	(vii) Agricultural Engineer- ing ;	
	(viii) Horticulture ;	
	(ix) Statistics ;	
	(x) Agricultural Economics ;	
	(xi) Tea Course.	
B.Com. (Pass & Hons.) Two Years	English, A recognised Indian Language, General Econo- mics and Indian Economics, Business Organisation, Com- mercial Law, Modern Eco- nomic Development, Accoun- tancy and one of the follow- ing groups :— (i) Advanced Accountancy & Auditing, (ii) Statistics, (iii) Banking, and (iv) Transport for the Pass Course. Three additional papers in Accountancy or Labour Eco- nomics and Industrial Rela- tions for the Honours Course.	I.Com. or Sec- retarial of Gauhati Uni- versity

<i>Degrees, Examination and Duration</i>	<i>Subjects</i>	<i>Entrance qualification</i>
M.A. M.Sc. Two Years	One of the following subjects :— Education, Assamese, Mathematics, Economics, Statistics, History, Philosophy and Botany. Eight Examination Papers in each subject.	B.A., B.Sc.
M.Com. Two Years	Eight Examination papers. <i>Compulsory :</i> 1. Applied Economics 2. Organization of Markets 3. Organization of Industries 4. Corporation Finance 5. Economics of Agriculture 6. Co-operation and Rural Development 7. Foreign Exchanges <i>Optional :—</i> (Any one of the following) :— 1. International Banking 2. Organization of Trade and Transport 3. Labour Administration 4. Advanced Accountancy.	B.Com.
B.T. Two Years	<i>Compulsory :</i> (i) Principles of Education including Educational Psychology (two papers)	B.A., B.Com. or B.Sc.

*Degrees, Examination
and Duration*

Subjects

*Entrance
qualification*

- (ii) History of Education ;
- (iii) General Methods,
School organization and
School Hygiene ;
- (iv) Contents and Methods
of teaching any three of
the following schools
subjects :

English : A Classical Language ; Assamese or Bengali or Hindi or Urdu ; A Modern European Language : French or German ; History ; Mathematics ; Geography (Equivalent to 2 subjects) :

Hygiene ; Music ; Arts and Crafts ; Physical Sciences (Physics, Chemistry and Astronomy) Botany, Zoology, Physiology and Geology, Primary and Infant School Subjects.

- (v) Essay and Composition ;
- (vi) One of the following
additional subjects :—
 - (a) Mental and Educational Measurements ;
 - (b) Social and Abnormal Psychology applied to Education ;
 - (c) Mental Hygiene and Child Guidance ;
 - (d) Methods and Organization in Nursery Schools, Kindergartens and Montessori Schools ;

<i>Degrees, Examination and Duration</i>	<i>Subjects</i>	<i>Entrance qualification</i>
	(e) Comparative Education with reference to selected countries in Europe and America.	
	(f) Education of Handicapped Children with reference to some selected types.	
M.B.B.S. Five years and Six months of Clinical practice		I.Sc. with Biology.
B.V.Sc. & A.H. Four years with Clinical practice		Matriculation or its recognised equivalent
LL.B. Three years		B.A., B.Com. or B.Sc.
Diploma in Secretarial Practice Two years	English (one paper) General Commercial Knowledge (one paper) Economics (one paper) Book-keeping (one paper) Company Law (one paper) Secretarial Practice (two papers) Business Methods (one paper) and Shorthand and Typewriting.	Matriculation or its recognised equivalent.

LABORATORIES AND LIBRARY

There are well-equipped laboratories in the departments of Botany, Geology, Geography, Statistics, Anthropology, Physics and Chemistry. The Library is located in the Law College buildings where that Post-graduate classes are at present held. A sum of Rs. 15,000/- is provided for purchasing books in the Annual Budget.

EXAMINATION FEES

	Rs.
Matriculation	18
I.A. and I.Sc.	30
B.A. and B.Sc.	45

			Rs
B.A. and B.Sc. (with Hons.)	..	..	55
I.Sc. (Agri.)	..	..	40
B.Sc. (Agri.)	..	..	55
B.T.	..	..	40
B.Com.	..	..	45
B.Com. (Hons.)	..	..	55
Diploma Exam. in Secretarial Practice	..	..	30
B.L.	..	..	30
M.A. and M.Sc.	..	..	100
M.B.B.S.	..	..	100
B.V.Sc. & A.H.	..	..	100

EXAMINATION RESULTS 1956

Matriculation	..	17,607	8,239
I.A.	..	3,918	1,561
I.Sc.	..	1,406	751
I.Sc. (Agri.)	..	39	27
I.Com.	..	449	162
B.A.	..	1,903	775
B.Sc.	..	404	218
B.Sc. (Agri.)	..	27	14
B.Com.	..	180	88
First M.B.B.S.	..	76	35
Final M.B.B.S.	..	107	49
B.T.	..	58	38
Law :			
(a) Preliminary	..	88	24
(b) Intermediate	..	23	17
(c) Final	..	20	11
Secretarial Practice	..	17	7
First B.V.Sc. & A.H.	..	29	12
Final B.V.Sc. and A.H.	..	6	5
M.A. Economics	..	42	40
Philosophy	..	12	4
History	..	15	13
Assamese	..	11	6
Education	..	13	11
M.Sc. Mathematics	..	17	8
Botany	..	10	9
Statistics	..	10	7
M.Com.	..	21	17
Teachers' Training Certificate in Geography		17	12

STUDENTS' ADVISORY BOARD

Secretary : Dr. B. K. Barua, M.A., B.L., Ph.D.

The aim of the Board is to help students with advice and information regarding courses and conditions of studies in India and abroad.

MILITARY TRAINING

The National Cadet Corps has been organised under the auspices of the Government of Assam and the University. Military Education has been introduced as an additional subject for the Intermediate Examination.

The University classes have been shifted to its permanent site at Jhalukbari, seven miles from Gauhati. Satisfactory arrangements for the residence of students and staff have been made in the University campus. There are three hostels and twenty residential quarters at the foot of the Navagrah Hills. A qualified Medical Officer is attached to the Hostels.

WOMEN'S EDUCATION

There are several colleges for women affiliated to the University. All the courses and privileges of the University are open to women students. A permanent hostel building for girl students has already been constructed at the permanent site of the University to accommodate 50 students.

FINANCIAL STATEMENT

1. Grants from the State Government	Rs. 11,93,310 0 0
2. Grants from the University Grants Commission	Rs. 3,65,143 12 0
3. Grants from the Government of India	Rs. 1,24,948 2 0
4. Chandrakanta Abhidhan (Revision) Fund	Rs. 4,000 0 0
5. B. K. Memorial Fund	Rs. 1,252 14 0
6. W. U. S. Grant for Earthquake & Flood Relief	Rs. 8,363 12 0

Subjects for Post-graduate studies and Research :—

Assamese, History, Philosophy, Economics, Commerce, Mathematics, Statistics, Botany, Physics, Chemistry, Geology, English, Anthropology, Agri. Botany and Education.

An Arecanut research scheme sponsored by the Indian Central Arecanut Committee is in operation in the Department of Botany.

A Scheme for investigation on production of Ergot in Assam and Industrial Utilisation of its products sponsored by the State Government is being implemented in the Department of Botany.

Implementation of a Folk-lore Research Scheme under the auspices of the University and financed by the University Grants Commission and the State Government has been put into operation.

A Scheme for an Anthropological study of the Assam Tribes (Tribal Culture Research Scheme) financed by the State Government (Assam) has been put into operation.

A Scheme of Sample Survey of Urban Employment and Un-employment in Assam approved by the Research Programmes Committee, Government of India, Planning Commission was initiated in August 1955 and completed in December 1956.

HANDLOOM SURVEY OF ASSAM, MANIPUR AND TRIPURA

The University has undertaken a sample survey of the Handloom Industry in Assam, Manipur and Tripura, at the instance of the All-India Handloom Board, Government of India, who have placed a sum of Rs. 1.02,000/- at the disposal of the University for the purpose. The scheme was formally started on the 5th November 1956. During the period under review, general schedules and questionnaires were framed and tried out. Sample villages and centres where the field-work will be conducted, were selected for some districts.

The actual field-work is started by the 1st May, 1957. It is expected to throw considerable light on all aspects of the Handloom Industry in the region under survey.

THIRD INTER-UNIVERSITY YOUTH FESTIVAL

Gauhati University annexed the following prizes in the Third Inter-University Youth Festival :

First prize in One-Act Play,

First prize in Group Dance,

First prize in Violin,

First prize in Manipuri Dance (Boys'), being the first among all Classical Dances,

Second prize in Manipuri Dance (Girls'), there being no first prize,

Third prize in group Singing.

The girl playing the heroine in the One-Act Play was declared the best actress in that competition. The Gauhati University Contingent was adjudged the best all-round team.

MANUSCRIPTS

The Manuscript Section of the University has acquired a number of valuable manuscripts, during the period under report, under the "Manuscript Collection Scheme," subsidised by the University Grants Commission.

More than 271 Manuscripts have already been acquired so far.

GUJARAT UNIVERSITY

Pursuant to a policy of decentralising the University administration in the State of Bombay, it was decided to create a number of Regional Universities. In furtherance of this object, the Gujarat University Act, 1949—Bombay Act No. L of 1949 was passed by the Bombay Legislative Assembly in November, 1949, to establish and incorporate a Teaching and Affiliating University to be known as the Gujarat University. The Act was assented to by His Excellency the Governor of Bombay on the 21st November, 1949 and the University became incorporated with effect from 23rd November, 1950.

Shri Harasiddhabhai V. Divatia, M.A., LL.B. was appointed the First Vice-Chancellor of the University. He was re-elected by the Senate as the Vice-Chancellor twice and he continues to hold the office at present.

One of the important steps taken by the Gujarat University is the introduction of Regional language viz. Gujarati as the medium of instruction and examination from June, 1955, in the First Year Arts, Science, Commerce and Agriculture classes. It is to progressively extend to higher classes in succeeding years.

The University had in the beginning only 20 institutions affiliated to it. But at present it has 34 affiliated colleges, 4 Recognised Post-graduate Institutions and 2 University Departments of its own. These are spread over Gujarat, Saurashtra and Kutch.

UNIVERSITY OFFICE BUILDING

The foundation stone of the University Building was laid by the Late Hon'ble Deputy Prime Minister, Sardar Vallabhbhai Zaverbhai Patel on the 1st of November, 1950.

The opening ceremony of the administrative wings of the Building was performed by the Hon'ble Minister for Education (Bombay State) Shri Dinkerrao N. Desai on 3rd March, 1954 and since then the office of the University is being housed in this building. The library block of the University too is ready and the Convocation hall is under construction.

The University has 2 Hostels with accommodation for 160 Post-graduate students.

The University has recently instituted the Ayurvedic Faculty and the courses of studies are under preparation.

CONSTITUTION OF THE UNIVERSITY

The Senate is the supreme governing body of the University. It ordinarily meets once a year in September or October on a date to be fixed by His Excellency the Chancellor and at such other time as may be convened by the Vice-Chancellor. A meeting of the Senate must also be convened on a requisition by 25 members of the Senate. The executive powers vest in the Syndicate and the Academic Council is the chief academic body of the University.

There are at present seven Faculties, viz. Arts including Education, Science, Technology including Engineering, Agriculture, Law, Medicine and Commerce.

OFFICERS AND STAFF OF THE UNIVERSITY

The Chancellor

Shri Hare Krishna Mahatab

The Vice-Chancellor

Shri Harasiddhabhai V. Divatia, M.A., LL.B.

Deans

Shri R. C. Parikh, B.A. (Hons.)	<i>Faculty of Arts</i>
Dr A. M. Trivedi, M.Sc., Ph D.	<i>Faculty of Science</i>
Prin. T. A. Desai, B.Sc. (Eng.), A M I E	<i>Faculty of Technology in-</i>
M E A	<i>cluding Engineering</i>
Shri H P Shukla, B.A., LL.B.	<i>Faculty of Law</i>
Dr. N R. Desai, MB, BS, (Dom.),	<i>Faculty of Medicine</i>
F R C.S (Eng.)	
Prin S V. Desai, M.S. (Columbia)	<i>Faculty of Commerce</i>
Shri Vallabhbhai Vaidya	<i>Faculty of Ayurvedic</i>
	<i>Medicine</i>

MEMBERS OF THE SYNDICATE (18)

(Sec. 19 (1) of the Gujarat University Act, 1949)

Vice-Chancellor: (Sec. 19(1) (i))

1. Shri Harasiddhabhai V. Divatia, M.A., LL.B.

Vice-Chancellor, Gujarat University,

Ahmedabad-9.

Rector: (Sec. 19(1) (ii))

Vacant

Director of Education: (Sec. 19(1) (iii))

2. Shri S. S. Bhandarkar, B.A. (Bombay and London),

Director of Education, Bombay State,

Poona.

Dean elected by the Deans of Faculties: (Sec. 19(1) (iv))

3. Shri Himatlal Prabhashanker Shukla, B.A., LL.B.,
7-B, Swastik Society, Ellis Bridge,
Ahmedabad-9.

Eight members elected by the Senate: (Sec. 19(1) (v))

4. Shri Sankalchand Mafatlal Shah, M.A.,
36, Jain Society, Ellis Bridge,
Ahmedabad-6.
5. Shri Batubhai H. Desai, B.A., LL.B.,
Raipur, Outside Baua's Pole,
Ahmedabad.
6. Shri Devendra Jethalal Joshi, M.A.,
262, Walkeshwar Road, Laxmi Vihar,
4th Floor, Bombay-6.
7. Shri Jhinabhai Ratanji Desai.
Sheth C. N. Vidyavihar, Ambavadi, Ellis Bridge,
Ahmedabad-6.
8. Dr. Bhasker R. Patel, M.D., M.R.C.P., T.D.D.,
20, New Queen's Road,
Bombay-4.
9. Shri Navnitlal Sakarlal Shodhan,
Near Railway Crossing, Ellis Bridge,
Ahmedabad-6.
10. Dr. Nanubhai Ranchhodji Desi, M.B.B.S. (Bom.), F.R.C.S. (Eng.),
Collector's Bungalow, Maninagar,
Ahmedabad-8.
11. Shri Biharilal Popatlal Shah, B.A., LL.B.,
Jagabhai Park, Kankaria,
Ahmedabad.

Two members elected by the Senate: (Sec. 19 (1) (v a))

12. Dr. Vikram A. Sarabhai, M.Sc., Ph.D.,
Physical Research Laboratory,
Ahmedabad-9.
13. Dr. Motibhai Desaibhai Patel, F.R.C.S. (Eng.), D.L.O. (London),
Motiganga, Ambawadi, Ellis Bridge,
Ahmedabad-6.

One member elected by the Heads of University Departments:
(Sec. 19(1) (vi))

14. Prof. Umashankar Jethalal Joshi, M.A.,
Director, University School of Gujarati Language & Literature,
Gujarat University,
Ahmedabad-9.

Four Principals elected by Principals of Affiliated Colleges :
(Sec. 19(1) (vii))

15. Shri Lalbhai Ratanji Desai, B.A., B.T. (Bom.), T.D. (London),
Principal, A. G. Teachers' College, Navrangpura,
Ahmedabad-9.
16. Shri Surendra Vaikunthrai Desai, M.S. (Columbia),
Principal, H. L. College of Commerce, Navrangpura,
Ahmedabad-9.
17. Dr. Kuverji Gosai Naik, M.A. (Bom.), D.Sc. (Lond.), F.R.I.C., F.N.,
Principal, Naofen Kelvani Mandal Science & Arts College,
Balsar.
18. Shri Mukundray Manilal Thakore, B.A., LL.B. (O.S.),
Principal, Sir L. A. Shah, Law College, Ellis Bridge,
Ahmedabad-6.

Registrar

Shri K. C. Parikh, M.A., LL.B.

Assistant Registrar

Shri J. M. Mehta, B.Sc., B.T.

Director, University School of Social Sciences

Shri B. R. Shenoy, M.A., M.Sc. (Econ.), (Lond.)

Director, University School of Gujarati Language and Literature

Shri Umashankar J. Joshi, M.A.

Librarian

Shri Kikubhai R. Desai

Chief Medical Officer

Dr. K. A. Shah, M.B.B.S.

Director of Physical Education

Shri V. P. Mehta

AFFILIATED COLLEGES AND THEIR PRINCIPALS :

Arts and Science Colleges

1. Gujarat College, Ahmedabad-6.
Principal: C. D. Deshpande, M.A. (Bom.), Dip. in Geography
(Lond.)
2. L. D. Arts College and M. G. Science Institute, Ahmedabad-9.
Principal: Dr. R. D. Desai, B.A., M.Sc. (Bom.), D.Sc., (Lond.),
F.R.I.C., F.A.Sc., F.I.I.Sc., F.N.I.

3. M. T. B. College, Surat.
Principal : K. L. Desai, M.A., LL.B., B.A. (Cantab)
4. J. & J. College of Science and C. B. Patel Arts Institute, Nadiad.
Principal : Dr. M. D. Avasare, B.A., M.Sc., Ph.D.
5. S. B. Garda College and B. P. Baria Science Institute, Navsari.
Principal : A. K. Trivedi, M.A., LL.B.
6. Petlad College, Petlad.
Principal : S. V. Shah, B.Sc., Ph.D.
7. M. N. College, Visnagar (N.G.).
Principal : Dr. Y. G. Naik, M.Sc., Ph.D.
8. Samaldas College & Sir P. P. Institute of Science, Bhavnagar.
Principal : J. B. Sandil, M.Sc.
9. Bahauddin College, Junagadh.
Principal : N. N. Bharucha, M.A.
10. Dharmendrasinhji College and Kotak Institute of Science, Rajkot.
Principal : G. R. Kotwal, M.A., B.Litt. (Oxford).
11. A. G. Teachers' College, Ahmedabad-9.
Principal : L. R. Desai, B.A., B.T., T.D. (Lond)
12. Sir Lallubhai Shah Law College (Arts Section), Ahmedabad-6.
Principal : M. M. Thakore, B.A., LL.B. (O.S.)
13. Dorbar Gopaldas Mahavidyalaya, Ahabadā (Halar : Saurashtra).
Principal : D. R. Mankad, M.A.
14. R. R. Lalan Intermediate College, Bhuj. (Kutch)
Principal : Y. D. Bhavs. M.A.
15. Mahila Mahavidyalaya, Porbandar.
Principal : N. N. Patel,
16. Jeyendrapuri Arts and Science College, Broach.
Principal : K. V. Desai, M.Sc.
17. Ramanand Mahavidyalaya, Ahmedabad.
Principal : Y. P. Shukla, M.A.
18. Shreyas Arts and Science College, Ahmedabad.
Principal : Smt. Bharatidevi A. Sarabhai, B.A. (Oxon).
19. St. Xavier's College, Ahmedabad.
Principal : Rev. Herbert A. D'souza, S.J., B.A. (Hons) M.A. (Columbia), Ph.L. (Rome), S.T.L. (Comillas), Ph.D. (Educ.) (Fordham).
20. Ramba Graduates Teachers' College, Porbandar (Saurashtra).
Principal : Smt. Sumitra N. Desai, M.A., M.Ed. (Bom), Ph.D. (Lond.)

Technology including Engineering

21. L. D. Engineering College, Ahmedabad-9.
Principal : S. V. C. Aiyar, M.A. (Cantab), M.I.E.E. (Lond.)
22. Lukhdhirji Engineering College, Morvi.
Principal : T. A. Desai, B.Sc. (Engg.), A.M.I.E., M.E.A.

Law

23. Sir Lallubhai A. Shah Law College, Ahmedabad 6.
Principal : M. M. Thakore, B.A., LL.B. (O.S.).
24. The A. M. Parekh Law College, Rajkot. ..
Principal : H. S. Sanghavi, M.A., LL.B.
25. Sarvajani Law College, Surat.
Principal : C. D. Vyas, M.A., LL.M.

Medicine

26. B. J. Medical College, Ahmedabad.
Principal : Dr. G. V. Barve, M.S. (Bom.).
27. L. M. College of Pharmacy, Ahmedabad-9.
Principal : Dr. R. P. Patel, M.Sc., Ph.D. (Lond.)
28. The M. P. Shah Medical College, Jamnagar.
Principal : P. C. Rakshit, Ph.D. (Edin.), M.Sc. (Cal.),
M.B.B.S. (Cal.).

Commerce

29. H. L. College of Commerce, Ahmedabad-9.
Principal : S. V. Desai, M.S. (Columbia).
30. Sir Kikabhai Premchand College of Commerce, Surat.
Principal : D. R. Samant, M.A.
31. M. J. College of Commerce, Bhavnagar.
Principal : S. C. Pathak, M.Com.

Recognized Institutions

32. Sheth Bholabhai Jeshingbhai Institute of Learning and Research,
Bhadra, Ahmedabad.
Director : Shri R. C. Parikh, B.A. (Hons.)
33. The Physical Research Laboratory, Ahmedabad-9.
Director : Dr. K. R. Ramanathan, M.A., D.Sc., F.N.I.
34. Sheth Vadilal Sarabhai General Hospital and Sheth Chinai
Maternity Home, Ahmedabad-6.
Superintendent : Dr. M. D. Desai, M.S. (Mad.), F.R.C.S. (Edin.),
M.Ch., Orth. (L'pool).
35. The Ahmedabad Textile Industry's Research Association,
Ahmedabad-9.
Director : Dr. T. S. Subramaniam, D.Sc.

NUMBER OF STUDENTS IN THE UNIVERSITY

University Departments :

1 University School of Gujarati Language & Literature,	3
2. University School of Social Sciences	73
3. University School of Psychology	35

Affiliated Colleges :

1. Gujarat College, Ahmedabad-6.	1957
2. L. D. Arts College & M. G. Sc. Inst., Ahmedabad-9.	2825
3. M. T. B. College, Surat.	1357
4. J. & J. College of Science and C. B. Patel Arts Institute, Nandiad.	492
5. S. B. Garda College & B. P. Baria Science Institute, Navsari.	696
6. Petlad College, Petlad.	127
7. M. N. College, Visnagar (N.G.)	424
8. Samaldas College & Sir P. P. Institute of Science, Bhavnagar.	795
9. Bahauddin College, Junagadh.	425
10. Dharmendrasinhji College, Rajkot.	1257
11. L. D. Engineering College, Ahmedabad-9.	301
12. Sir Lallubhai A Shah Law College, Ahmedabad-6. (Arts & Law College together).	1029
13. Sarvajani Law College, Surat.	107
14. B. J. Medical College, Ahmedabad.	426
15. L. M. College of Pharmacy, Ahmedabad-9.	309
16. H. L. College of Commerce, Ahmedabad-9.	1141
17. Sir Kikabhai Premchand College of Commerce, Surat.	557
18. Lukhdhirji Engineering College, Morvi.	152
19. M. J. College of Commerce, Bhavnagar	345
20. A. G. Teachers' College, Ahmedabad-9.	145
21. R. R. Lalan Intermediate College, Bhuj-Kutch.	176
22. Darbar Gopaldas Bahavidyalaya, Aliabadā (Halar : Saurashtra	81

Recognised Institutions :

1. Sheth Bholabhai Jeshingbhai Institute of Learning & Research, Ahmedabad.	59
2. The Physical Research Laboratory, Ahmedabad-9.	26
3. Sheth Vadilal Sarabhai General Hospital and Sheth Chinai Maternity Home, Ahmedabad-6.	21

NO. OF SUCCESSFUL STUDENTS IN THE UNIVERSITY
IN THE FIRST HALF OF THE YEAR 1955

<i>Examination :</i>	<i>No. of successful students :</i>
1. T. D. (Part I & II)	27
2. B.Ed.	86
3. F.Sc. (Agri.)	42
4. S.Sc. (Agri.)	37
5. B.Sc. (Agri.)	43
6. Inter Science	1237
7. B.Sc. (Sub.)	513
8. B.Sc. (Prin.)	611
9. Inter Arts	1669
10. Inter Commerce	546
11. B.Com.	178
12. Law Preliminary	47
13. 1st LL.B. (Old Rules)	32
14. 1st LL.B. (New Rules)	156
15. First M.B.B.S.	44
16. Second M.B.B.S.	50
17. Third M.B.B.S.	39
18. F.E.	268
19. S.E. (Civil) (New Rules)	215
20. S.E. (Mech. & Elect.) (New Rule)	86
21. B.E. (Civil) (New Rules)	89
22. B.E. (Mech.) (New Rules)	32
23. B.E. (Elect.) (New Rules)	23
24. B.E. (Civil) (Old Rules)	6
25. B.E. (Mech. & Elect.) (Old Rules)	15
26. Second LL.B. (New Rules)	76
27. B.A. (Special)	900
28. B.A. (General)	45
29. M.A.	56
30. M.Sc. (Maths.)	..
31. M.Com.	15
32. M.S. (Part I)	4
33. M.S. (Part II)	.
34. 2nd LL.B. (Old Rules)	92
35. M.D. Part I	7
36. M.D., Part II	2
37. M.Pharm.	..
38. M.Sc. (Med.)	..
39. M.Sc. (Agri.)	5
40. M.Ed.	5
41. B.Sc. (Med.)	1
42. LL.M.	1

SCHOLARSHIPS AND MEDALS

The University has instituted a number of scholarships and fellowships for the students who top the list of successful candidates at the various University examinations and who show high proficiency in certain subjects of the examinations. Some Gold Medals are also awarded to students on the result of the degree examinations. Beside the affiliated colleges have also provided a large number of scholarships for the students who show bright performance in their studies.

PROVISION FOR RESEARCH

Facilities for research work for the M.A. and the Ph.D. degrees in Economics and Sociology have been provided in the University School of Social Sciences even Research work for the M.A. and Ph.D. degrees in Gujarati is being done in the University School of Gujarati Language and Literature. Besides these facilities available in the University Departments, the recognised institutions and affiliated colleges also provide adequate facilities for research work in various subjects. Teachers from affiliated colleges and recognised institutions are recognised for guiding students working for degree by research. With a view to encouraging higher research the University has instituted ten scholarships of Rs. 100 each p.m. for students who desire to work for Ph.D. degree by research. The University also awards merit scholarships to post-graduate students in the University Schools.

The University awards the following research degrees: M.A., Ph.D. (in the faculties of Arts, Science, Agriculture, Engineering, Medicine and Commerce).

Research grants are awarded every year to the teachers of the affiliated colleges as recommended by the Grants Utilization Committee.

UNIVERSITY BULLETIN & JOURNAL

The University publishes its official organ, the Gujarat University Bulletin, in February, May, August and November, its annual subscription being Rs. 4. It publishes news and feature articles of interest to the colleges and institutions affiliated to or otherwise connected with it.

It has also been decided to start publication of the University Journal called "Vidya — The Gujarat University Journal". There will be two sections in a year viz. (1) Vinayan Vibhaga — Humanities number and (2) Vignan Vibhaga — the Science number.

The journal will be issued in the middle of March and the middle of September. It will contain original contributions as well as selected excerpts from the theses submitted for the post-graduate examinations of the University.

WOMEN'S EDUCATION :

Admission to all courses of studies is open to all women ; and the affiliated colleges and the recognised institutions treat them on equal terms with men-students. Mahila Mahavidyalaya, Porbandar has been affiliated to the University for teaching courses of study leading upto Intermediate Arts.

LIBRARY ..

The University Library housed in a spacious wing in the University Building is under the management of the Library Committee, subject to the general supervision and control of the Syndicate. The total number of books in the library at the end of the year was 17,290. The aggregate amount spent on books and periodicals during the year 1954-55 was Rs. 43,136-5-5.

THE FOREIGN UNIVERSITIES INFORMATION BUREAU

Gujarat University runs Foreign University Information Bureau with a view to helping students intending to proceed to Foreign Universities for further studies by supplying them with requisite available information in connection with admission to various courses of study, hostel and residential facilities, scholarships, etc and also to helping them in securing admission to various courses of study by forwarding their applications through proper channels. Shri K. C. Parikh, M.A., LL.B. the Registrar of this University is working as the Secretary of the Bureau.

The Bureau has collected nearly 2200 prospectuses, hand-books, Calendars etc. of various Universities in India and abroad.

UNION PUBLIC SERVICE COMMISSION

The Gujarat University runs a training class with a view to preparing students for the various competitive examinations conducted by the Union Public Service Commission, New Delhi. The first batch of 6 students appeared at the I.A.S. and other examinations held in September 1954. The results were declared on 22-7-55 and it is gratifying to state that Mrs Lilien C. Borsada who availed herself of the training facilities at this University was one of the sixty-four candidates declared successful at the I.A.S. examination.

MILITARY AND PHYSICAL EDUCATION & SPORTS

Military Training :

(1) The 4th and the 7th Bombay Battalion, N.C.C. has its headquarters at Ahmedabad, having detachments in the various Colleges as follows :

AHMEDABAD

1. Gujarat College	..	2½	Pl.
2. L. D. Arts & M. G. Science Institute	.	2½	Pl.
3. H. L. College of Commerce	..	1	Pl.
4. St. Xavier's College	..	1	Pl.
5. B. J. Medical College	..	1	Pl.
6. M. N. College, Visnagar	..	1	Pl.

(2) The 9th Bombay Battalion, N.C.C. has its headquarters at Vallabh Vidyanagar, Anand, having detachments in the various Colleges as follows :

SURAT

1. M. T. B. College, Surat	..	2	Pl.
2. K. P. Commerce College	..	1	Pl.

- (3) 1st Bombay EME Sec. has its headquarters at Ahmedabad
L. D. College of Engineering .. 1 Pl.

1st SAURASHTRA BATTALION — N.C.C

The 1st Saurashtra Battalion has its headquarters at Rajkot.

1. Dharmendrasinhji College	..	3	Pl.
2. Bahauddin College	..	3	Pl.
3. Samaldas College	.	3	Pl.
4. M. J. Commerce College	.	2	Pl.

- 11th Saurashtra E.M.E. Sec. N.C.C. has its headquarters at Morvi
Lukhdhirji Engineering College . 2 Pl.

BHUJ—(KUTCH) (Independent Coy.)

R. R. Lalan College	..	2	Pl.
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The strength of each Platoon is approximately 55. The cadets are given training in Drill and also in the use of small arms and in allied subjects such as Field Craft First-Aid, Sanitation, Hygiene etc.

Enrolment in the N.C.C. is voluntary and there is no service liability.

Physical Training is compulsory for the first two years in the Colleges. Each College has a trained and duly qualified Physical Instructor on the staff and the University has appointed a Director of Physical

Education to supervise and co-ordinate the activities of Physical Education in the various affiliated Colleges. He also organises Inter-Collegiate and Inter-Group Tournaments in various games and sports.

There is provision for out-door games like Cricket, Foot-ball, Tennis, Hockey as also for Indian games in most of the affiliated Colleges and a large number of students take advantage of these facilities. The University Board of Sports controls sports activities of the University while the Board of Students' Welfare organises activities for the Welfare of students such as field work and social camps, youth festivals, tours, etc., and conducts medical examinations. A full-time Chief Medical Officer is appointed by the University for the organisation of medical examination of the students and to do the follow-up work.

The University participates in the Inter-University tournaments in the following games :

Foot-ball, Cricket, Tennis, Athletics, Hu-tu-tu, Kho-Kho, Volley-ball and Badminton. It has donated a rotating Trophy for Volley-ball and Dr. Nargund Memorial Trophy for Hockey to be awarded to the Inter-University Champion in Volley-ball and Hockey.

Courses of Studies and Examinations :

The University offers in Arts the Diploma in Teaching, B.A. (General and Special), M.A. and Ph.D. Degree ; in Science B.Sc., M.Sc. and Ph.D. Degrees ; in Commerce, B.Com., M.Com., and Ph.D. Degree ; in Agriculture, B.Sc. (Agriculture) and M.Sc. (Agriculture) ; in Engineering, B.E. (Civil, Mechanical and Electrical) and M.E. (Civil, Mechanical and Electrical) Degrees ; in Law, the LL.B. and the LL.M. Degrees ; in Medicine, the Degrees of M.B.B.S. Bachelor of Pharmacy, and M.Pharm, B.Sc. (Medical), M.Sc. (Medical), M.D. and M.S. and Post-Graduate Diploma in Ophthalmology, and undergraduate diploma in Pharmacy.

INTERMEDIATE ARTS

(1) Intermediate Examination.—The course of study for this examination extends over two academic years during the first of which candidates are examined by affiliated Colleges in the subjects prescribed for the First Year examination. The subjects have been grouped as shown below, and the eligibility of candidates to enter upon the courses for the Intermediate Arts or the Intermediate Science are determined in accordance with the subjects in which they satisfy the Principal of a College :

- (i) Candidates with subjects of group (a) shall be eligible for entering upon the course for the Intermediate Arts.

- (ii) Candidates with subjects of group (b) shall be eligible for entering upon the course for the Intermediate Science Examination.

The following are the Groups and the subjects under them appointed by the University for the first two terms and candidates are required to take any one of the two groups A.B. as mentioned below :—

FOR THE FIRST YEAR EXAMINATIONS.

Regulation 8.

Group A. (i.e. First Year Arts).

Compulsory Subjects.

1 (a) English	One paper	100 marks	3 hours
1 (b) Hindi	One paper	100 marks	3 hours

*Note :—*The candidate must obtain 25 per cent of marks separately in 1 (a) and 1 (b) and 30 per cent in total of 1 (a) and 1 (b).

2. (a) Mother Tongue or Additional English or Additional Hindi	} One paper with texts	100 marks	3 hours

2 (b) Classical Language or a Modern European Language with texts.	One paper	100 marks	3 hours
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*Note :—*The candidate must obtain 25 per cent of marks separately in 2 (a) and 2 (b) and 30 per cent in the total of 2 (a) and 2 (b).

3. Indian Administration	One paper	100 marks	3 hours
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The following shall be the optional subjects out of which the candidate will be required to take any such subjects from among them as carry 300 marks in the aggregate.

1. Mathematics	Two papers	100 marks	3 hours
2. An outline of World History	One paper	100 marks	3 hours
3. Civics	One paper	100 marks	3 hours
4. Geography	One paper	100 marks	3 hours
5. An outline of the Principal Religions of the world.	One paper	100 marks	3 hours

FIRST YEAR SCIENCE

GROUP B.

Regulation 8.

- | | |
|--|--|
| 1. English — One paper — 100 marks — 3 hours | |
| 2. Section I — Hindi — 50 marks | |
| Section II — Modern Indian — 50 marks. | } Total 100 marks
and of three
hours' duration |
| Languages or Additional English or | |
| Additional Hindi. | |

N.B.—The marks obtained in both the papers shall be added and the candidates will be declared to have passed the Examination with 30 per cent of marks of the total, provided the candidates secure 25 per cent marks in each of the two papers. The marks obtained under the head of languages by the candidates shall not be counted in deciding the class at the F.Y. Science Examination.

- | | | |
|---|-----------|---|
| 3. Physics | One paper | 100 marks—3 hours—50 marks for
Practicals. |
| 4. Chemistry | One paper | 100 marks—3 hours—50 marks for
Practicals. |
| 5. Biology | One paper | 100 marks—3 hours—50 marks for
Practicals. |
| 6. Mathematics — Two papers — each 100 marks and of three hours' duration | | |

At the Intermediate Examination held by the University at the end of the second year, candidates are examined as follows :

For 1937 Examination and onwards.

R. 10 :

The candidates will be examined in the following heads :—

- | | | | |
|----------------|-----------|-----------|---------|
| 1. (a) English | one paper | 100 marks | 3 hours |
| 1. (b) Hindi | one paper | 100 marks | 3 hours |

Note :—The candidate must obtain 25 per cent of marks separately in

- | | |
|---|-------------------------------|
| 1 (a) and 1 (b) and 30 per cent in the total of 1 (a) and 1 (b). | |
| 2. (a) Mother Tongue or
Additional English
or Additional Hindi.
(with texts) | } one paper 100 marks 3 hours |

2 (b) Classical Language or a
Modern European

Language with texts one paper 100 marks 3 hours

Note :—The candidate must obtain 25 per cent of marks separately in 2 (a) and 2 (b) and 30 per cent in the total of 2 (a) and 2 (b).

3. Principles of Economics one paper 100 marks 3 hours.

4. Logic — Indian and European
Systems or Mathematics two papers 100 marks each.
3 hours each.

5. Sociology or Psychology
or Geography one paper 100 marks 3 hours

The minimum for a pass is 30 per cent of the full marks in each head. Candidates who obtain 60 per cent of the aggregate are placed in the First Class and those who obtain 45 per cent in the Second Class.

(ii) *B.A. (General and Special)* : The course of study for the B.A. (General Examination) extends over two academic years, subsequent to passing the Intermediate Arts Examination and that for B.A. (Special) Examination over the same period.

The Schemes for the B.A. General and Special courses are as follows :—

I—B.A. GENERAL

1. English (Compulsory).—Two papers of three hours and one hundred marks each, of which one shall include composition.

II. Four other voluntary Subjects (with two papers in each of three hours and one of one hundred marks each save as hereinafter otherwise provided) to be selected from the following Groups (A) to (G), provided that the candidate chooses his subjects from at least three Groups and provided further that the candidate who takes (D) (iv) shall take (D) (i) and that the candidate who takes (F) (v) shall take (F) (i) but not (D) (iv).

N.B.—Identical subjects occurring under two separate Groups shall not be offered by candidates as two separate Subjects.

(A) LANGUAGES.—

(a) *Modern European* :—English, French and German—2 papers based on texts of Modern Literature, Prose, Poetry and Drama in each Language.

(b) *Modern Indian* :—Gujarati, Marathi, Hindi, Urdu, Sindhi and Bengali.

2 papers as under :—

Paper I : Poetry.

Paper II : Prose and Drama.

(c) *Classical.—Oriental and European* :—Sanskrit, Pali, Prakrit (Ardhamagadhi), Arabic, Persian, Avesta-Pahlavi,—2 papers—Taxis.

(B) PHILOSOPHY

(B) I-Philosophy—A :

- (a) History of Philosophy—2 papers.
- (b) Psychology—2 papers.
- (c) Moral and Social Philosophy—2 papers.
- (d) Logic and Metaphysics—2 papers.
- (e) Philosophy of Religion
Philosophy of Education—2 papers
- (f) Any two of the following :—
 - (i) Plato : The Republic—(One paper)
 - (ii) Aristotle : Nichomachean Ethics—(One Paper)
 - (iii) Geeta—(One Paper)
 - (iv) Akha's Philosophy—(One paper).

(B) II-Philosophy—B :

Entire Psychology :—

- (a) Psychology—2 Papers.
- (b) Abnormal and Animal Psychology—2 Papers.
- (c) Applied Psychology—2 Papers.
- (d) Experimental Psychology—2 Papers.
- (e) Schools of Psychology and History of Psychology } Seven Psychology by Heidebrluder hundred years of Psychology by Flugel—2 Papers.
- (f) Psychology of Religion and Psychology of Education } 2 Papers.

No. I will constitute B.A. (Philosophy A) and II will constitute B.A. (Philosophy B) Entire Psychology.

(C) HISTORY—

- (i) Ancient Europe, (ii) Modern Europe, (iii) Ancient and Mediaeval India, (iv) Modern India, (v) Persian History, (vi) Constitutional

History, (vii) Elements of Political Science, (viii) Ancient Indian Culture and (ix) Islamic Culture.

(D) ECONOMICS—

- (i) Principles of Economics, (ii) Economic History, (iii) Elements of Political Science, (iv) Statistical Method and (v) Society and Social Evolution.

(E) SOCIOLOGY—(1953 Exam. only).

- (i) Cultural Anthropology and (ii) Society and Social Evolution.

(E) SOCIOLOGY—(1959 Exam. and onwards).

- (i) General Sociology. (ii) Cultural Anthropology.

(F) MATHEMATICS—

- (i) Pure Mathematics, (ii) Applied Mathematics, (iii) Algebra and Geometry, (iv) Calculus and Differential Equations and (v) Statistics.

N.B.—Subjects (iii) and (iv) must be taken together.

(G) SCIENCES—

- (i) Physics, (ii) Chemistry, (iii) Botany, (iv) Zoology, (v) Geology, (vi) Geography and (vii) General Science.

II—B.A. SPECIAL

I. *English (Compulsory)*—Two papers of three hours and one hundred marks each, of which one shall include Composition.

II. Four other voluntary subjects (with two papers in each of three hours and one hundred marks each save as hereinafter otherwise provided), so that at least three subjects listed in Roman Numerals under any one Group from among the Groups (B) to (K) or three hours listed in Roman Numerals under any one language from among the languages under Group (A)—sub-groups (a) to (d), are selected. Provided further that a language offered in addition to the six papers in a language is not from the same sub-group from which six papers are selected, except that in the case of Hindi as a special subject or a general subject this proviso will not apply. Also it will be open to a candidate to select two papers in Pali or Ardhamagadhi with six papers in Sanskrit or to take two papers in Sanskrit with six papers in Pali or Ardhamagadhi. The two papers to be answered in this additional language will be the two papers as laid down for the Examination for the B.A. General in the language concerned.

Note 1.—The proviso requiring the choice of an additional language, if offered, to be made from a sub-group other than the one to which the language in which 6 papers are offered for Honours belongs, will be in operation from June 1950.

Note 2.—No candidate can take Statistical Method in Group D (Economics) and Statistics under Group E (Mathematics) at the same time.

The groups and sub-groups and subjects are as under :—

N.B.—Identical subjects occurring under two separate Groups shall not be offered by candidates as two separate subjects.

(A) LANGUAGES :

(a) English—

- (i) Papers I and II.—The same as for the B.A. (General).
- (ii) Two literary forms, Chaucer (Prologue and a Canterbury Tale), and History of the English Language.
- (iii) Criticism and Prosody ; History of English Literature.

(b) Modern European—French or German.

- (i) Papers I and II.—The same as for the B.A. (General).
- (ii) Translation, Essay, Grammar and Oral—2 papers.
- (iii) History of Literature from 1500 to 1800 A.D. with a few outstanding illustrative works—2 papers.

(c) Modern Indian.—Gujarathi or Marathi or Hindi or Urdu or Sindhi or Bengali.

- (i) Papers I and II :—The same as for the B.A. (General).
- (ii) Paper III :

1. Essay	30 marks.
2. Grammar	30 marks.
3. Origin and Development of Language	25 marks.
4. Translation in the same language	15 marks.

Paper IV.—Literary Criticism : Indian and Western.

Paper V.—A study of the History of the Literature.

Paper VI.—A detailed and comprehensive study of three well-known works of different periods including the study of the Literary forms of each.

(d) Classical.—Sanskrit or Pali or Prakrit (Ardhamagadhi) or Avesta-Pahalvi or Persian or Arabic.

- (i) Papers I and II.—The same as for the B.A. (General).
- (ii) Translation, Grammar and History of Literature—2 papers.
- (iii) Old Literature according to the basic requirements of each language—2 papers.

(e) Ancient Indian Culture of Islamic Culture—2 papers each.

FOR EXAMINATION IN 1957 AND ONWARDS.

(B) PHILOSOPHY—

(B) (I) Philosophy—A :

- (a) History of Philosophy—2 papers.
- (b) Psychology—2 papers.
- (c) Moral and Social Philosophy—2 papers.
- (d) Logic and Metaphysics—2 papers.
- (e) Philosophy of Religion
and
Philosophy of Education } —2 papers.
- (f) Any two of the following :—
 - (i) Plato : The Republic (One Paper)
 - (ii) Aristotle : Nichomachean Ethics (One Paper).
 - (iii) Geeta (One Paper).
 - (iv) Akha's Philosophy (One Paper).

(B) (II) Philosophy—B :

Entire Psychology :—

- (a) Psychology—2 papers.
- (b) Abnormal and Animal Psychology—2 papers.
- (c) Applied Psychology—2 papers.
- (d) Experimental Psychology—2 papers.
- (e) Schools of Psychology
and
History of Psychology } Seven Psychology of Heidegger hundred years of Psychology by Flugel—2 papers.
- (f) Psychology of Religion
and
Psychology of Education } 2 papers.
- (g) Psychology of Child
Life and Psychology
of the Sexes and of
Married Life. } 2 papers.

No. I will constitute B.A. (Philosophy A) and II will constitute B.A. (Philosophy B) Entire Psychology.

(C) HISTORY—

- (i) Ancient Europe, (ii) Modern Europe, (iii) Ancient and Mediaeval India, (iv) Modern India, (v) Persian History, (vi) Constitutional

History, (vii) Elements of Political Science, (viii) Ancient Indian Culture, (ix) Islamic Culture, (x) Physical Anthropology, (xi) Cultural Anthropology.

(D) ECONOMICS—

- (i) Principles of Economics, (ii) Economic History, (iii) Elements of Political Science, (iv) Statistical Methods, (v) Society and Social Evolution and (vi) Indian Economic Problems.

N.B.—Every candidate for the B.A. (Special) in Economics must offer (i) and (vi).

(E) SOCIOLOGY—(1958 Exam. only)

- (i) Cultural Anthropology, (ii) Society and Social Evolution and (iii) Social Organization and Social Amelioration.

(E) SOCIOLOGY—(1959 Exam. and onwards).

- (i) General Sociology.
(ii) Cultural Anthropology.
(iii) Society and Social Amelioration and Essay.

(F) MATHEMATICS—

- (i) Algebra and Geometry, (ii) Calculus and Differential Equations, (iii) Mechanics, (iv) Astronomy, Electricity and Magnetism and (v) Statistics.

N.B.—Subjects (i), (ii) and (iii) are compulsory.

(G) SCIENCE—

- (i) Physics, (ii) Chemistry, (iii) Botany, (iv) Zoology, (v) Geology, (vi) Geography and (vii) General Science.

(H) HOME SCIENCE—(For 1957 Examinations and thereafter)

- (i) Food and Nutrition (ii) Child Care and Mother Craft (iii) Home Management (iv) General Science for Arts students or Social Science for Science students.

N.B.—Subjects (i) to (iv) are compulsory.

- (1) There shall be two papers of 100 marks and 3 hours' duration each under (ii) Child and Mother Craft and (iv) Social Sciences (for Science students) ;
- (2) There shall be two Papers of 60 marks and 3 hours' duration each and a practical of 50 marks of 2 hours' duration each in (i) Food and Nutrition, (iii) Home Management and (iv) General Science (for Arts students) ; 30 marks shall be reserved for the year's work to be assessed by the Colleges concerned. The practical examination in (iv) General Science (for Arts Students) shall be a combined one for all the three Science subjects, viz. Physics, Chemistry and Biology.

(I) ANCIENT INDIAN CULTURE (For 1957 examination and thereafter)

Paper I—Cultural History of Ancient India from earliest times upto 1000 A.D.

Paper II :—An Outline of the Cultural History of Gujarat upto 1300 A.D.

Paper III—General acquaintance with the principal Tenets of the Vedic, Buddhist, Jain Religions with special reference to Bhagwad-Geeta the Dhamapada and the Yogadrasti-Sammuchchaya (by Shri Haribhadra Suri).

Paper IV—An outline of Indian Architecture, Sculpture and Painting upto 1000 A.D.

Paper V—A detailed study of Varnas, Ashramas, and Samskaras of Ancient India.

Paper VI—A study of Main Works of Ancient Indian Drama with special emphasis on social life depicted therein.

Note :—Paper III, IV, V and VI are to be studied as sources of Ancient Indian Culture.

N.B.—Papers I to VI are compulsory for student taking Ancient Indian Culture.

(iii) Master of Arts (M.A.) The course of study extends over two years subsequent to passing the B.A. Examination. A candidate is required to study and be examined in one of the following branches ; Languages, History, Economics, Sociology, Politics and Archaeology, Philosophy, Mathematics and Statistics, Ancient Indian Culture and Islamic Culture. The examination consists of eight papers in each subject. A thesis may be offered in lieu of the whole examination in the subjects of History and Philosophy or in lieu of the four Principal papers in Sanskrit, Pali, Ardhamagadhi, Persian, or Arabic subject to certain conditions. The minimum for a pass in Mathematics is either 40 per cent in the aggregate or 25 per cent in each paper and 37½ per cent in the aggregate and in other subjects it is one fourth of the full marks in each paper and three eights in the aggregate. In languages a candidate must obtain 25 per cent in each of the eight papers, 30 per cent in the total of two papers in his subordinate language and 40 per cent in the total of the six papers in the principal language. Candidates who obtain 65 per cent, in the aggregate are placed in the First Class and those who obtain 50 per cent in the Second Class.

II Science

(i) Intermediate Examination.—A candidate has to pass in either Group B in the First Year certificate examination and is required to study and be examined in English and Hindi and a Modern Indian Language or Additional Hindi or Additional English and Physics (two papers and a practical), Chemistry (two papers and a practical), and

Mathematics (two papers), or Geology or Biology (two papers and a practical). For a pass, a candidate must obtain 33 per cent of the total marks in Mathematics, 33 per cent in each paper and in each practical examination in other subject and 30% of aggregate in English and Hindi or Modern Indian Language or Additional English or Additional Hindi. Candidates who obtain 60 per cent in the aggregate are placed in the First Class and those obtaining 45 per cent in the Second Class.

(ii) Bachelor of Science (B.Sc.) The course extends over two years subsequent to passing the Intermediate Examination in Science. Candidates may take any two of the following subjects: Mathematics, Physics, Chemistry, Botany, Geology, Zoology, Animal Physiology, Comparative Anatomy and Embryology, Microbiology, Experimental Psychology, Geography—one principal subject and other subsidiary. At the examination, papers are set as follows:—

<i>Subject</i>	<i>As a Subsidiary Subject</i>	<i>As a Principal Subject.</i>
Mathematics	.. 4 papers of three hours each.	8 papers of three hours each.
Physics	.. 2 papers and 2 practical examinations*	4 papers and 4 practical examinations.
Chemistry	.. 2 papers and 2 days practical examinations ¹	4 papers and 3 days' practical examination.
Botany	.. 2 papers and 2 practical examinations	4 papers and 4 practical examinations.
Geology	.. 2 papers and 2 practical examinations*	4 papers and 3 practical examinations.
Zoology	.. 2 papers and 2 practical examinations*	4 papers and 4 practical examinations.
Animal Physiology	.. 2 papers and 2 practical examinations	3 papers and 3 practical examinations and an oral examination.
Anatomy and Embryology,	.. 2 papers and 2 practical examinations	3 papers and 3 practical examinations and an oral examination.

* Same as for the B.A. (Hons.) Examination.

<i>Subject</i>	<i>As a Subsidiary Subject</i>	<i>As a Principal Subject</i>
Microbiology	.. 2 papers and 2 practical examinations and an oral examination	3 papers and 3 practical examinations and an oral examination.
Experimental Psychology.	(As a principal subject only.)	3 papers and 3 practical examinations.
Geography	.. 2 papers and 2 practical examinations	

For a pass, candidate must obtain in each subject 33 per cent in the papers taken together, and in the practical examination taken together, or in Mathematics in all the papers taken together. Successful candidates who obtain 60 per cent in their principal subject and 45 per cent in the subsidiary subject are placed in the First Class and those who obtain 48 per cent in the Principal subject and 40 per cent in the subsidiary subject are placed in the Second Class. Successful candidates who obtain 48 per cent of the marks in the principal and the subsidiary subjects taken together are placed in the Second Class if they obtain 45 per cent in the Principal subject, and those who obtain 60 per cent of the total marks in the principal and subsidiary subject taken together are placed in the First Class, if they obtain 55 per cent in the principal subject. A candidate who secures 66 per cent in the principal subject is declared to have passed with distinction.

(iii) *Master of Science (M.Sc.)*.—Bachelor of Science of this or of certain other recognised Universities are admitted to the Course of study for M.Sc. degree extending over two years. Candidates must offer one of the following branches: Mathematics, Physics, Chemistry, Botany, Zoology, Geology and Animal Physiology.

The M.Sc. Degree may be taken by research alone or by written examination and practical (except in Mathematics) or by research and examination combined. A candidate may submit a thesis which may be accepted in lieu of the whole or a part of the examination.

The examination in Mathematics is the same as that the M.A. Examination. There are four papers and four practical examinations in Physics, four papers and at least four days' practical examinations in Chemistry and three papers and at least three days' practical examination in each of the subjects Botany, Zoology and Geology.

Successful candidates are divided into those who pass and those who pass with distinction.

III. COMMERCE

(i) *Intermediate Examination*.—The course of study extends over two academic years subsequent to passing the Matriculation or S.S.C. Examination. At the F.Y. Commerce and the Intermediate Examination candidates will be examined in the following subjects:

FIRST YEAR COMMERCE

- | | | |
|---|------------|---------------------|
| 1. English | Two papers | 50 marks each. |
| 1.A. Hindi | One paper | 100 marks |
| 2. Composition in a Modern Indian Language or French or German
(Gujarati, Marathi, Hindi, Sindhi, Urdu, and Kannada are the recognised Modern Indian Languages). | } | One paper 100 marks |
| Or
An Additional paper in English | | |
| Group B : | | |
| 3. Book-keeping and commercial Arithmetic | One paper | 100 marks |
| 4. Elements of Commerce | One paper | 100 marks |
| 5. Salesmanship and Publicity. | One paper | 100 marks |
| Group C : | | |
| 6. Economic and Commercial Geography. | One paper | 100 marks |
| 7. Elements of Civics and Indian Administration. | One paper | 100 marks |
| Or
Mathematics | One paper | 100 marks |
| Group A— | | |
| 1. English—one paper, 100 marks. | | |
| 2. Hindi—one paper 100 marks. | | |
| 3. Commercial Correspondence and Composition—one paper 100 marks. | | |
| 4. Composition in a Modern Indian Language or French or German—one paper, 100 marks. (Gujarati, Marathi, Hindi, Urdu, Sindhi Bengali are the recognized Modern Indian Languages). | | |
| Or
An additional paper in English—100 marks. | | |

Group B—

5. Elements of Economics—one paper, 100 marks.
6. Forms of Economic Organization (with special reference to India and the United Kingdom), one paper, 100 marks.

Group C—

7. Accountancy—one paper, 100 marks.
8. Either Secretarial Practice or Insurance or Mathematics—one paper, 100 marks.

The minimum for a pass is 33 per cent of full marks in each subject and 40 per cent in each group. A candidate obtaining 60 per cent of the total marks obtainable will be placed in the First Class and those obtaining 50 per cent in the Second Class.

(ii) *Bachelor of Commerce (B.Com.)*:—The course extends over two years subsequent to passing the Intermediate Examination in Commerce of this University. Candidates will be examined in the following subjects:—

Group 'A'—

1. Principles of Economics—Two papers of 100 marks each.
2. Modern Economic Development—One paper, 100 marks.

Group 'B'—

3. English—One paper, 100 marks.
4. Business Organization—One paper, 100 marks.
5. Mercantile Law—One paper, 100 marks.
6. Statistics and Scientific Methods—One paper, 100 marks.

Group 'C'—

7. Any one Special subject of the following—

Three papers—100 marks each.

1. Accounting and Auditing.
2. Actuarial Science.
3. Banking.
4. Economics of Cotton.
5. Public Finance and Administration.
6. Statistics.
7. Transport.
8. Co-operation.

N.B.—Candidate can choose Actuarial Science or Statistics only if they have taken Mathematics as their optional subject at the Inter-Commerce Examination.

To pass the examination the candidate must obtain 33 per cent of the full marks in each subject and 40 per cent in each group. Those of

successful candidates who obtain 60 percent of the total marks obtainable will be placed in the First Class and those obtaining 50 per cent in the Second Class.

(iii) *Master of Commerce (M.Com.)*.—Any person who has taken the degree of the Bachelor of Commerce of this University or of any other University recognized by this University as equivalent thereto may, after he has worked under the guidance of a recognized University teacher for at least two years subsequent to his passing the Bachelor of Commerce Examination, be admitted to the examination for the degree of Master of Commerce in accordance with the relevant regulations.

Candidates may appear either for a written examination of 8 papers each of 3 hours' duration and carrying 100 marks, or may submit a thesis on a subject dealt with in any of the papers prescribed, in lieu of the whole of the written examination. The written examination shall consist of the following subjects :—

Group A—Compulsory Subjects

1. Public Economics—One paper—100 marks.
2. Organized Markets—One paper—100 marks.
3. Organization of Trade and Transport—One paper—100 marks.
4. Corporation Finance—One paper—100 marks.

Group B—Voluntary Subjects

- (a) Actuarial Science—4 papers,—100 marks each or (aa) Statistics or (aaa) Advanced Accounting, Costing and Industrial Administration or any two of the following sub-groups—
- (b) (i) Agricultural Co-operation—One paper—100 marks.
(ii) Co-operative Finance and Marketing—One paper—100 marks.
- (c) (i) Organization of Industries—One paper—100 marks.
(ii) Labour Administration—One paper—100 marks.
- (d) (i) Foreign Exchanges—One paper—100 marks.
(ii) International Banking—One paper—100 marks.

To pass the examination candidates must obtain 30 percent of the full marks in each paper and 40 percent in each group.

IV. TEACHING

(i) *Diploma in Teaching*.—A candidate who has passed the Matriculation Examination of the University of Bombay or an examination recognized as equivalent to it and has obtained subsequently teaching experience for a period of not less than 3 years, is allowed to appear for the examination for the Diploma in Teaching, provided he has kept two terms (each of 65 days) at a College affiliated to this University for the

said Diploma and has completed the prescribed course of practical work to the satisfaction of the head of his College. Candidates who have passed the Inter-Arts, Inter-Science or Inter-Commerce can appear for the said Diploma after keeping two terms. The examination consists of two parts.

Part I (Four papers)—Written examination.

Part II (Two lessons)—Practical examination.

Part I

Paper I—Elementary Principles of Education and Psychology.

Paper II—Special Methods.

Paper III—General Methods, School Hygiene and School Administration.

Paper IV—An outline on Twentieth Century development in Indian Education and Educational Administration in the Province of Bombay.

In the papers on Methods—General and Special—candidates shall answer questions on the Methods pertaining to the subjects selected by them for Part II.

3. *Practice of Education*—(Special Methods)—

Any two of the following :—

- (i) Method in English.
- (ii) Method in Modern Indian Languages.
- (iii) Method in Sanskrit.
- (iv) Method in Persian.
- (v) Method in French.
- (vi) Method in History.
- (vii) Method in Geography.
- (viii) Method in Mathematics.
- (ix) Method in Science.
- (x) Method in Civics and Administration.

4. *Educational Administration*—

- (i) School Organization and Management.
- (ii) School Hygiene and Educational Administration.

5. *History of Education*—

- (i) Outline of History and Indian Education.
- (ii) Indian Education and its problems.

6. *Educational Statistics or System of Education in other countries*—

In Part II of the Examination, candidates will be tested in their practical skill in class management and class teaching. Each candidate

will be required to give lessons in two special subjects selected by him under Part I.

The total number of marks for the Part I examination will be 500, except paper 6 which will have one paper of two hours and 50 marks, and for Part II 300.

To pass the Examination in either Part I or Part II a candidate must obtain not less than 40 percent of the total number of marks in each Part.

VI. ENGINEERING

A. Civil Engineering

A candidate for the degree of Bachelor of Engineering must produce a certificate showing that he has passed the Intermediate Examination in Science with Physics, Chemistry and Mathematics of Gujarat University or any examination or examinations recognised as equivalent to this examination.

A candidate will be required to pass three examinations :

1. First Examination in Engineering.
2. Second Examination in Civil Engineering.
3. Examination for the degree of Bachelor of Engineering (Civil).

The F. E. course extends over one year.

The S. E. (Civil) Examination course extends over one year after passing the F.E. Examination.

The B. E. (Civil) Degree Examination course extends over one year after passing the S.E. (Civil) Examination.

The following is the scheme of instructions and examination for the First Examination in Engineering, Second Examination in Engineering (Civil) and for the Examination in the degree of Bachelor of Engineering (Civil) :—

First Examination in Engineering (Civil)

1. C.M.E. Mathematics I. (One paper, 100 marks 3 hours).
2. C.M.E. Mathematics II. (One paper, 100 marks 3 hours).
3. C.M.E. Applied Mechanics (One paper, 100 marks 3 hours).
4. C.M.E. Engineering Drawing (One paper, 100 marks 4 hours ; Term work 50 marks).
5. C.M.E. Surveying I. (One paper, 100 marks 3 hours Term work 50 marks ; Pract. Exam. 50 marks).
6. C.M.E. Heat Engines I. (One paper, 100 marks 3 hours).
- 6-A. C.M.E. Electrical Engineering I. (One paper 100 marks 3 hours).

7. C.M.E. Heat Engines I (One paper, 100 marks 3 hours).
8. C.M.E. Workshop Practice (Prac. Exam. 100 marks; Term work 50 marks).
9. C.M.E. Engineering Materials and Elementary Construction. (One paper, 100 marks 3 hours).

Second Examination in Engineering (Civil)

10. C.M.E. Mathematics III (One paper, 100 marks 3 hours).
11. C.M.E. Hydraulics (One paper, 100 marks); (Term Work 25 marks).
12. C.M.E. Materials and Structure I. (One paper, 100 marks 3 hours).
13. C.M.E. Testing of Materials (College Certificate) Term Work 25 marks.
14. C. Theory of Structures I. (One paper, 100 marks 3 hours).
15. C. Railways, Docks and Harbours (One paper, 100 marks, 3 hours).
16. C. Surveying II. (One paper, 100 marks, 3 hours; Prac. Exam. 50 marks, Term Work 50 marks).
17. C. Construction I. (One paper, 100 marks 3 hours).
18. C. Engineering Drawing and Design I. (One paper, 100 marks 4 hours; Term Work 50 marks; Sketching and Oral 50 marks).
19. C. Elements of Economics. (One paper, 100 marks 3 hours).
20. C. Engineering Geology (One paper, 75 marks; 2 hours). Practical Examination 25 marks.

Degree Examination in Engineering (Civil)

21. Hydraulics and Hydraulic Machinery (One paper, 100 marks 3 hours). Term Work 25 marks.
22. C. Theory of Structures II. (One paper, 100 marks 3 hours).
23. C. Structural Drawing and Design (One paper, 100 marks 4 hours, Term Work 100 marks; Sketching and Oral 50 marks).
24. C. Roads and Bridges (One paper, 100 marks, 3 hours).
25. C. Water Supply and Sanitary Engineering (One paper, 100 marks 3 hours).
26. C. Construction II (One paper, 100 marks 3 hours).
27. C. Civil Engineering Drawing and Design II (Term Work 150 marks; Sketching and Oral 50 marks).
28. C. Irrigation Engineering (One paper, 100 marks 3 hours).
29. C. Quantity Surveying and Costing (One paper, 100 marks 4 hours; Term Work 50 marks, oral and sketching 50 marks).

To pass an examination in the Faculty of Engineering a candidate must obtain 33 per cent of the full marks in each subject. Where there is a practical examination, term work or oral, a candidate must obtain 33 per cent of marks separately in the written, practical and oral examinations and grand total for being declared to have passed the examination.

In addition, a candidate must obtain a minimum of 45 per cent of the grand total for being declared to have passed the examination.

Those of the candidates who secure 45 per cent or more marks in aggregate and have passed an examination at one sitting will be declared to have passed the examination in the Second Class.

Those of the candidates who secure 60 per cent or more marks in aggregate and have passed an examination at one sitting will be declared to have passed the examination in the First Class.

Those of the candidates who secure 66 per cent or more marks in aggregate and have passed an examination at one sitting will be declared to have passed the examination in the First Class with Distinction.

B. Mechanical Engineering

A candidate for the degree of Bachelor of Engineering must produce a Certificate showing that he has passed the Intermediate Examination in Science with Physics, Chemistry and Mathematics of the Gujarat University or any Examination or Examinations recognised as equivalent to this Examination.

A candidate will be required to pass three examinations:—

1. First Examination in Engineering.
2. Second Examination in Engineering (Mech. and Elect.)
3. Examination for the degree of Bachelor of Engineering (Mechanical).

The F.E. Course extends over one year.

The S.E. (Mech. and Elect.) Course extends over one year after passing the F.E. Examination.

The B.E. (Mech.) Degree Examination Course extends over one year after passing the S.E. (Mech. and Elect.) Examination.

The following is the scheme of instruction and examination for the First Examination in Engineering, Second Examination in Engineering (Mech. and Elect.) and for the Examination for the degree of Bachelor of Engineering (Mechanical):—

PART II MECHANICAL ENGINEERING COURSE

(A) F.E.

Same as for Civil.

(B) S.E.

10. C.M.E. Mathematics III One paper 100 marks 3 hours.
11. C.M.E. Hydraulics & Hydraulics Machinery. One paper 100 marks 3 hours. Term Work 25 marks.
12. C.M.E. Materials & Structures I. One paper, 100 marks 3 hours.
13. C.M.E. Testing of Materials College certificate Term Work 25 marks.
14. M.E. Heat Engines II One paper, 100 marks 3 hours. Prac. Exam. 50 marks. Term Work 25 marks.
15. M.E. Electrical Engineering II. One paper, 100 marks 3 hours. Prac. Exam. 50 marks. Term Work 25 marks.
16. M.E. Machine Design and Drawing. One paper, 100 marks 4 hours. Term Work 50 marks. Prac. Oral and Sketching 50 marks.
17. M.E. Mechanical Technology and Practice I Prac. 100 marks Term Work 50 marks.
18. M.E. Theory of Machines I. One paper, 100 marks 3 hours.
19. M.E. Engineering Economics. One paper, 100 marks 3 hours.

(C) B.E.

20. M.E. Materials & Structure III. One paper, 100 marks 3 hours.
21. M.E. Electrical Technology III. One paper, 100 marks 3 hours
22. M. Metallurgy One paper, 100 marks 3 hours. Term Work 25 marks.
23. M. Mechanical Technology and Practice II. One paper, 100 marks 3 hours. Prac. Exam. 100 marks. Term Work 50 marks.
24. M. Heat Engines III One paper, 100 marks 3 hours.
25. M. Heat Engines IV One paper, 100 marks 3 hours. Prac. Exam. 50 marks. Term Work 25 marks.
26. M. Theory of Machines II One paper, 100 marks 3 hours.
27. M. Machine Design One paper, 100 marks 4 hours. Term Work 50 marks. Oral and Sketching 50 marks.
28. M.E. Workshop management and Business Organisation. One paper, 100 marks 3 hours.
29. M.E. Seminar College certificate only.

To pass an examination in the Faculty of Engineering, a candidate must obtain 33 per cent of the full marks in each subject. Where there

is a practical examination, term work or oral, a candidate must obtain 33 per cent of marks separately in the written, practical and oral examinations and grand total for being declared to have passed the examination.

In addition, a candidate must obtain a minimum of 45 per cent of the grand total for being declared to have passed the examination.

Those of the candidates who secure 45 per cent or more marks in the aggregate and have passed the examination at one sitting will be declared to have passed the examination in the Second Class.

Those of the candidates who secure 60 per cent or more marks in the aggregate and have passed the examination at one sitting will be declared to have passed the examination in the First Class.

Those of the candidates who secure 66 per cent or more marks in the aggregate and have passed the examination at one sitting will be declared to have passed the examination in the First Class with Distinction.

C. Electrical Engineering

A candidate for the degree of Bachelor of Engineering must produce a Certificate showing that he has passed the Intermediate Examination in Science with Physics, Chemistry and Mathematics of the Gujarat University or any Examination or Examinations recognised as equivalent to this Examination.

A candidate will be required to pass three examinations :—

1. First Examination in Engineering.
2. Second Examination in Engineering (Mech. & Elect.)
3. Examination for the degree of Bachelor of Engineering (Electrical).

The F.E. Course extends over one year.

The B.E. (Electrical) Degree Examination Course extends over one year after passing the S.E. (Mech. & Elect.) Examination.

The B.E. (Electrical) Degree Examination Course extends over year after passing the S.E. (Mech. & Elect.) Examination.

The following is the scheme of instruction and examination for the First Examination in Engineering, Second Examination in Engineering (Mech. & Elect.) and for the Examination for the degree of Bachelor of Engineering (Electrical).

PART III ELECTRICAL ENGINEERING COURSE

(A) F.E.

Same as for Civil

(B) S.E.

Same as for Mechanical

(C) B.E.

- 20. M.E. Materials and Structures II One paper, 100 marks 3 hours.
- 21. M.E. Electrical Power I One paper, 100 marks 3 hours.
- 22. E. Electrical Power II One paper, 100 marks 3 hours.
- 23. E. Electric Measurements and Inst. One paper, 100 marks 3 hours.
- 24. E. Electrical Engineering III One paper, 100 marks 3 hours. Prac. Exam. 50 marks. Term Work 50 marks.
- 25. E. Applied Electronics One paper, 100 marks 3 hours. Prac. Exam. 50 marks, Term Work 25 marks.
- 26. E. Applied Thermodynamics One paper, 100 marks 3 hours.
- 27. E. Electrical Design and Project. One paper, 100 marks 4 hours. Term Work 50 marks. Oral & Sketching 50 marks.
- 28. F. Workshop management and Business Organisation One paper, 100 marks 3 hours.
- 29. E. Seminar College Certificate only.

To pass an examination in the Faculty of Engineering a candidate must obtain 33 per cent of the full marks in each subject. Where there is a practical examination, term work or oral, a candidate must obtain 33 per cent of marks separately in the written, practical and oral examinations and grand total for being declared to have passed the examination.

In addition, a candidate must obtain a minimum of 45 per cent of the grand total for being declared to have passed the examination.

Those of the candidates who secure 45 per cent of more marks in aggregate and have passed the examination at one sitting will be declared to have passed the examination in the Second Class.

Those of the candidates who secure 60 per cent or more marks in aggregate and have passed the examination at one sitting will be declared to have passed the examination in the First Class.

Those of the candidates who secure 66 per cent or more marks in aggregate and have passed the examination at one sitting will be declared to have passed the examination in the First Class.

Master of Engineering Examination (M.E.)

A candidate who has passed the B.E. Examination of this University and has worked for at least three terms in a College under the guidance of a University Teacher is admitted to the examination in the Special Branch in which he has taken the B.E. Degree examination (four terms in a branch other than the one in which he has taken the B.E. Degree examination). The examination will consist of:

- (1) Written Examination of four papers.
- (2) Practical Examination or a dissertation in lieu of the practical examination.

Practical Examination will consist of both practical and oral tests extended over a period of not less than 12 hours.

The dissertation may consist of a report of any research work done by the candidate or a comprehensive and critical review of any recent development of the subject or a detailed report of any important design or development work that the candidate has executed on his own responsibility.

Each of the papers, shall carry 100 marks and the practical examination or dissertation shall carry 400 marks.

Law

Candidates for the degree of LL.B. must have passed the Intermediate Arts or the Intermediate Science, or the Intermediate Commerce Examination of this University or the Intermediate Arts or the Intermediate Science or Intermediate Commerce Examination of any other University or Board of Intermediate Education recognised as equivalent to the corresponding examination of this University and will be required to pass three examinations, the first to be called the "Law Preliminary Examination" the second to be called the "1st Examination for the Degree of LL.B." and the third to be called the "2nd Examination for the Degree of LL.B."

Candidates who have passed the Bachelor's Degree Examination of this University in the Faculties of Arts Science or Commerce or of any other University recognised as equivalent thereto, will not be required to pass the Law Preliminary Examination, and will be entitled to enter upon the course for the 1st examination for the Degree of LL.B.

Candidates who have passed the Bachelor's Degree Examination of this University in Agriculture, Medicine or Engineering or in any other Faculty except Arts Science or Commerce or of any other University recognised as equivalent thereto will be eligible for admission to the Law Course but will be required to pass the Law Preliminary Examination as mentioned above.

(1) *Law Preliminary Examination Course*

No candidate will be admitted to this examination unless he shall have passed the Intermediate Arts or Intermediate Science or Intermediate Commerce Examination of this University or an equivalent examination of any other University or Board of Intermediate Education or have passed the Bachelor's Degree Examination of this University in Agriculture, Medicine or Engineering or in any other Faculty except Arts or Science or Commerce or any other University recognised as equivalent thereto and have thereafter kept two terms in a Law or an Arts College affiliated to this University for the purposes of teaching the prescribed course.

Candidates will be required to answer the following five papers, each carrying 100 marks and of three hours' duration :—

Paper I—English Texts—Prose and Poetry.

Paper II—English—Essay, Precis and Composition.

Paper III—Outlines of Social, Economic and Constitutional History of India from 1773 to the 26th January, 1950.

Paper IV—History and Development of Social Institutions.

Paper V—Politics.

To pass the examination the candidate must obtain one-third of the full marks in each paper. Those obtaining 45 per cent or more in the aggregate shall be declared to have passed the examination in the Second Class. Those obtaining 60 per cent or more in the aggregate shall be declared to have passed the examination in the First Class.

(2) *First LL.B. Examination Course*

No candidate will be admitted to this examination unless he shall have passed the Law Preliminary Examination of this University or of any other University recognised by this University as equivalent thereto, or the Bachelor's Degree Examination of this University in Faculties of Arts Science or Commerce or of any other University recognised by this University as equivalent thereto, and have thereafter kept two terms in a Law College, affiliated to this University.

Candidates will be required to answer the following five papers, each carrying 100 marks and of three hours' duration :—

Paper I—Law of Crimes with special reference to the Indian Penal Code.

Paper II—The Law of Torts.

Paper III—Principles of the Law of Contract with Special reference to the first 75 sections of the Indian Contract Act.

and

The Principles of the Law of Indemnity, Bailments Surety, Agency, Sale of Goods, Partnership and Negotiable Instruments.

Paper IV—Elements of Constitutional Law.

Paper V—Indian Constitution.

(3) *Second LL.B. Examination Course*

No candidate will be admitted to the examination unless he shall have passed the First Examination for the Degree of LL.B. in this University and after passing the said examination, shall have kept two terms in a Law College affiliated to this University.

Candidates will be required to answer the following six papers, each carrying 100 marks and of three hours' duration :—

Paper I—Hindu Law.

Paper II—Mohammadan Law and the Indian Succession Act.

Paper III—Law of Property, Easements and Registration Act.

Paper IV—Equity, Trust and Specific Relief.

Paper V—Elements of Public International Law and Jurisprudence.

Paper VI—Conflict of Laws (Books to be recommended.)

To pass each of the First and Second LL.B. Examinations, the candidate must (a) obtain one-third of the full marks in each paper and (b) obtain one-half of the total marks obtainable. Those of the successful candidates who obtain two-thirds or more of the total marks obtainable will be placed in the First Class.

Master of Laws (LL.M)

Admission to the courses of study for this Degree is granted to Law Graduates of this or of certain other recognised Universities and the course extends over two academic years in the case of students passing the Second LL.B. Examination under the new rules and three academic years in the case of students passing the Second LL.B. Examination under the old rules. Every candidate for the Degree of LL.M. is required (1) to register himself as a Post-graduate student of the University (2) to get himself enrolled as a regular student of a law College affiliated to the University and (3) to report himself daily to the Principal of the College. Candidates are required to study and be examined in any one of the following four branches :—

Branch I—

- (1) Jurisprudence (1 paper).
- (2) Roman Law (1 paper).
- (3) International Law, Public and Private (1 paper).
- (4) Principles of Legislation (1 paper).
- (5) Constitutional Law (British and Indian) (1 paper).
- (6) Essay (1 paper).

Branch II—

- (1) Hindu Law (3 papers) or Mohammadan Law (3 papers).
- (2) Testamentary and Intestate Succession (excluding Hindu and Mohammadan Law) (1 paper).

- (3) Marriage, Divorce and Guardianship (excluding Hindu and Mohammadan Law) (1 paper).
- (4) Essay on Hindu or Mohammadan Law (1 paper).

Branch III—

- (1) Real property, etc., (2 papers).
- (1) Principles of Equity with special reference to the Law of Trusts and Specific Relief (1 paper).
- (3) The Law of Easements and Prescription (1 paper).
- (4) Customary and Statute Law relating to Land Tenure in British India (1 paper).
- (5) Essay (1 paper).

Branch IV—

- (1) The Law of Contract (including sale of goods) (1 paper).
- (2) Companies and Insolvency (1 paper).
- (3) Mercantile and Maritime Law (1 paper).
- (4) The Law of Torts (1 paper).
- (5) Law of Crimes (1 paper).
- (6) Essay (1 paper).

The Degree of LL.M. may be taken either by written examination or by thesis.

The examination in each branch consists of six papers. To pass the examination, candidates must obtain 50 per cent in each of the papers. Those who obtain 66 per cent of the aggregate are placed in the First Class.

DEGREES OF BACHELOR OF MEDICINE AND BACHELOR OF SURGERY (M.B.,B.S.)

1.—Admission to the Medical Course

No candidate shall be allowed to begin the medical curriculum proper until :—

(i) He has completed the age of 17 years at the time of admission or will complete this age on the day of the commencement of the Second Term :

(ii) He has passed :—

- (a) The Intermediate Examination in the Medical group of an Indian University which includes a practical test.

OR

- (b) The Intermediate Examination in Arts or Science of an Indian University with Physics, Chemistry and Biology and which shall include a practical test in each of these subjects.

OR

- (c) B.Sc. Examination of an Indian University in Physics, Chemistry and Biology have been taken in the Intermediate Examination with a practical test in these subjects.

OR

- (d) The Intermediate Examination held by the Boards of Higher Secondary School and Intermediate Education with Physics, Chemistry and Biology which includes a practical test in each of these subjects recognised by Government.

OR

- (e) Any other examination which in scope and standard is found equivalent to the Intermediate Science Examination of an Indian University taking Physics, Chemistry and Biology including a practical test in each of these subjects.

II.—The Medical Curriculum

With regard to the course of study and the examinations which persons desirous of qualifying for the medical profession shall go through in order that they may become possessed of the knowledge and skill requisite for the efficient practice of medicine, surgery and midwifery, it is prescribed as follows:—

Period of Study

1. That every student should undergo a period of certified study extending over not less than 5½ academic years between the date of commencement of his study of the subjects comprising the medical curriculum and the date of completion of the examination and subsequent training; provided that the last 4 years in case of the course containing 5½ years (1½ years Pre-Clin. plus 3 years Clin. plus 1 year post-exam. training), the period must have been spent in study and training in the clinical group of subjects, which shall ordinarily be continuous.

2. That the 5½ years (1½ years pre-clin. plus 3 years. Clin. plus 1 year post-exam. training) course should be occupied in the study of the professional scientific subjects with an introduction to clinical methods, and that no student should be certified as attending classes in the clinical group of subjects until he has satisfied the Examiners that he has a competent knowledge of the subjects of these periods.

3. That throughout the whole period of study the attention of the student should be directed by his teachers to the importance of the preventive aspects of medicine, and of measures for preservation of positive health.

In every course of professional study, and in the examinations, the following subjects should be included—

III.—Pre-Clinical Subjects

(In the Teaching of these Subjects Stress should be laid on Fundamental and Basic Principles of the Science)

Details are to be avoided—

1. Human anatomy and Physiology.
2. Introduction to Pharmacology.

IV.—Clinical Subjects

(N.B.)—Throughout the whole period of study the attention of the student should be directed by the teachers of this subject to the importance of its preventive aspects. Emphasis should be laid more on practical training than didactic lectures.

2. The normal reactions of the body to injury and infection, as introduction to general pathology and bacteriology.
3. Pathology and Bacteriology.
4. Pharmacology including Pharmaco-therapeutics and Toxicology.
5. Forensic Medicine—This course should include instruction in the duties which devolve upon practitioners in their relation to the State, and on the generally recognised rules of medical ethics.
6. Preventive Medicine and Social Medicine.
7. Medicine.
8. Surgery.
9. Midwifery, Diseases of women and infant Hygiene.

Post-Examination training :—

12 months training after final examination. Work to be done under a medical officer or practitioner in an institution recognised by the University or Medical Council of India as a teacher for the purpose. Three months of this internship to be in public health work preferably in rural areas, provided that in the case of Universities which enjoin 2 years pre-clinical course, it should be 6 months, 2 months of which should be spent in public health work preferably in rural areas.

I. *First Professional Examination.*—After 1½ years of study in (1) Anatomy, (2) Physiology and (3) Organic Chemistry (for those who had not had this subject in the Intermediate Science course, Medical group).

Pass Marks—50 per cent in written and oral together *
50 per cent in practical.

II. *Second Professional Examination.*—After at least 1½ academic years subsequent to 1st Professional Examination in (1) Pathology and Bacteriology, (2) Pharmacology including Pharmaco-therapeutics and Toxicology, (3) Forensic Medicine.

Pass Marks—50 per cent in written and Oral together *
50 per cent in practical.

* It has been decided by the University that the Oral marks should be added to the Practical.

III. Third Professional or Final Examination.—Three academic years after 1st Professional examination and not less than six months after the second Professional examination.

In (1) Medicine including preventive and social medicine and therapeutics, (2) Surgery including E.N. & T. & Ophthalmology, and (3) Midwifery and Gynaecology, all including applied Pathology.

Pass Marks—50 per cent in written and oral tests together * 50 per cent in clinical and practical work. Provided the candidate secures 50 per cent of the marks allotted to the clinical part of the subject.

Periodical examination results should be taken into account at all examinations.—The question of number of periodical examination be left to the Universities for consideration. The Universities should ask Examiners to allot for certified work done in classes as assessed by teachers, a definite percentage of marks, not exceeding ten allotted to practical or clinical test as the case may be.

(ii) *Degree of Doctor of Medicine (M.D.).*—The examination for this Degree is open to Bachelors of Medicine and Bachelors of Surgery of his or of any other recognized University and to Licentiates of Medicine and Surgery of this University only, who have been engaged in continuous practice of the Medical profession for at least five years, one of which must be spent in the post-graduate study of the particular branch in which he offers the examination, at a recognised Hospital or Institute. The period may be reduced under special conditions.

Candidates will be examined in one of the following branches :

The examination in Branches I to IV will consist of—

Branch I—Medicine and diseases of Children

- (A) One paper in Medicine, including Mental diseases, Medical Applied Anatomy and Diseases of Children.
- (B) One paper in Pathology (common to Branches I and II).
- (C) One paper in General Medicine, (common to all the four Branches).
- (D) An Essay on one of the two subjects in Medicine including the History of Medicine.
- (E) Clinical, oral and practical examination.

Branch II—Pathology

- (A) One paper in Pathology, including Bacteriology.
- (B) One paper in Pathology (common to Branches I and II).

* It has been decided by the University that the Oral marks should be added to the Practical.

- (C) One paper in General Medicine, (common to all the four Branches).
- (D) An essay on one of the two subjects in Pathology including History of Pathology and Bacteriology.
- (E) Practical and Oral Examinations.

Branch III—Midwifery (Including diseases of infants and Gynaecology)

- (A) One paper in Midwifery and diseases of New-born.
- (B) One paper in Gynaecology. Paper (A) and (B) shall each include one question on Pathology.
- (C) One paper in General Medicine, (common to all the four Branches).
- (D) An essay on one of the two subjects in Midwifery and Diseases of Women.
- (E) A clinical, and oral and practical examination.

Branch IV—Pharmacology

- (A) One paper on the theoretical and experimental aspects of Pharmacology and Toxicology (including Bio-Assay, Chemical Pharmacology, etc.).
- (B) One paper in Applied Pharmacology, and Therapeutics (including Physiotherapeutics, immunotherapeutics).
The paper may include questions on general experimental and functional pathology.
- (C) One paper in General Medicine (common to all the four Branches).
- (D) An essay on one of the two subjects in Pharmacology and Therapeutics including the history of the subject.
- (E) Clinical, oral and practical examinations.

A candidate may submit a thesis embodying the results of his own independent research in the branch in which he appears. The thesis may exempt him from a part or the whole of the written examination only.

The Examination will report whether the candidates have failed or passed or passed with distinction.

A New course in M.D. has been introduced with effect from 1st June 1950 and the M.D. Degree can now be taken in the following six branches:—

- I. Medicine and Therapeutics.
- II. Pathology and Bacteriology.
- III. Obstetrics, Gynaecology, and Diseases of Infancy.

IV. Pharmacology.

V. Pediatrics.

VI. Tuberculosis.

The Examination for the Degree of M.D. (New Course) consists of two parts as under :—

Part I.—Consisting of General Medicine, General Pathology, Applied Anatomy, Applied Physiology and Applied Pharmacology. This part is common to all branches.

Part II.—Consisting of subjects of the respective speciality as detailed in the course.

The examinations for Part I and Part II of all branches are held twice a year. The examinations for Part I and Part II cannot be taken by any candidate concurrently.

The course is now of three years' duration. The course for Part I extends over one year and the course for Part II extend over two years. The Examination for Part I in the Branches I, III, V and VI shall consist of three papers and branches II and IV shall consist of two papers. The examination for Part II in all the branches consists of four papers and a clinical practical and oral examination.

(iii) *Degree of Master of Surgery.*—The conditions of admission to this examination are the same as for the M.D. Examination. Candidates will be examined in Surgery (two papers) Pathology including Bacteriology and Surgical Anatomy (one paper), an essay on one of the two subjects in Surgery including the History of Surgery (one paper). There will also be a Clinical Examination with operations on the cadaver, and an oral and practical examination with examination of Pathological specimens and X-ray Skiagrams. The Examiners will report whether a candidate has passed or failed or has passed with distinction.

A thesis may be submitted on the same conditions as at the M.D. Examination.

New course in M.S. has been introduced from 1st June 1950. The M.S. Degree can now be taken in the following four branches :—

I. General Surgery.

II. Oto-rhino-laryngology.

III. Orthopaedics.

IV. Ophthalmology.

The Examination for the Degree of M.S. (New Course) consists of two parts as under—

Part I.—Consisting of General Surgery, General Pathology, Applied Anatomy, Applied Physiology and Applied Pharmacology.

This part is common to all branches.

Part II.—Consisting of subjects of the respective speciality as detailed in the course.

The examinations for Part I and Part II of all branches are held twice a year. The examinations for Part I and Part II cannot be taken by any candidate concurrently.

The course is now of three years' duration. The course for Part I extends over one year and the course for Part II extends over two years. the examination for Part I in the different Branches shall consist of three papers. The examination for Part II in all the branches consists of four papers and a clinical, practical and oral examination.

(iv) *Bachelor of Pharmacy (B. Pharm.)*

THREE YEARS COURSE

(*B. Pharm Degree*)

First B. Pharm.

O. 301-A: A candidate for the examination of First B. Pharm. must produce a certificate to the effect that he has passed the Intermediate Examination in Pharmacy, or Diploma in Pharmacy or Intermediate Science (B. Group Exam.) of this University or an examination equivalent thereto in English, Physics, Chemistry and Biology, or B.Sc. Examination with Chemistry and Botany as their subjects and in addition he must have completed the course of study as laid down in R. 196-G in an institutions recognised by the University for the purpose.

O. 301-B: A candidate who has failed to pass the First B. Pharm. Examination may appear at the subsequent examination on the submission of a new application, the payment of a fresh fee and the production of a certificate that he has during the period between the declaration of his failure and subsequent reappearance for the examination, pursued courses of study in the subjects of the examination, to the satisfaction, of the Head of the Institution from which he appears.

R. 196-A: The course of study for the First B. Pharm. Examination shall be of one year's duration consisting of two terms.

R. 196-B: There shall be an examination at the end of the First Year called the First B. Pharm. Examination.

R. 196-C: Candidate for the First B. Pharm. Examination shall be examined after they have satisfactorily completed the prescribed courses of study as laid down in R. 196-G and have kept two terms for the purpose at an affiliated college in the following subjects:

Scheme of Examination

<i>Subject of Examination.</i>	<i>Total Marks for Theory including sessional.</i>	<i>Total marks for practical Exam. including sessional.</i>
1 General Pharmacy	100 marks	100 marks
2 Pharmaceutical Chemistry—I (Inorganic, Physical and Analytical)	100 marks	100 marks
3 Pharmaceutical Chemistry—II (Organic)	100 marks	—
4 Pharmacognosy I	100 marks	100 marks
5 Pharmaceutical Economics and Accounting	75 marks	—
6 Dispensing Pharmacy	100 marks	100 marks
7 Forensic Pharmacy	75 marks	—
8 Mathematics	100 marks	—

N.B. : All written and practical examinations shall be of three hours' duration. Candidates who have passed the Intermediate Pharmacy Examination or (Diploma in Pharmacy) Examination will be required to study Mathematics instead of dispensing Pharmacy and Forensic Pharmacy and pass with at least 40% marks.

Candidates who have passed the Intermediate Science Examination or the B.Sc. Examination with Chemistry and Botany as their subjects will be required to study Dispensing Pharmacy and Forensic Pharmacy of Diploma standard instead of Mathematics and pass with at least 40% marks.

These marks in Mathematics, Dispensing Pharmacy and Forensic Pharmacy shall not be considered for passing the examination according to R. 193-E.

R. 196-D : The regular record of both theoretical and Practical class work, Examinations conducted at an affiliated college imparting training for this course shall be maintained for each student and 30 per cent of the total marks for each subject in theory and 40 per cent of the total marks for each subject in Practical shall be allotted for these records.

The sessional marks shall be calculated on the basis of average of the marks secured in Examinations held during the year which shall not be less than three in numbers.

R. 196-E : To pass an Examination, candidates must obtain at least 40 per cent of the marks in Theory (including sessional) and

Practical (including sessional) separately of each subject viz. General Pharmacy, Pharmaceutical Chemistry I & II Pharmacognosy I and Pharmaceutical Economics and Accounting, and in addition, must obtain at least 50% of the total marks assigned to the whole examination. The marks obtained in Dispensing Pharmacy, Forensic Pharmacy and Mathematics shall not be considered for these 50% of the total marks assigned to the whole examination. No class will be awarded to the successful candidates at the First B. Pharm. Examination.

R. 196-F: A candidate who has secured 50 per cent of the total marks (including sessional marks) in any subject at the First B. Pharm. Examination may, at his option, be exempted from appearing in that subject at a subsequent examination, provided he has passed in all the heads of passing in that subject and will be declared to have passed the whole examination when he has passed in all the remaining subjects and has obtained the total marks in those subjects as required under R. 196-E. Candidates passing the examination in this manner by compartments will not be eligible for a prize or scholarship to be awarded at the examination.

O. 301-C: A student who passes in all subjects but one at the First B. Pharm. Examination as mentioned in R. 196-C will be allowed to keep terms and appear for the Second B. Pharm. Examination after keeping two terms but will not be declared to have passed the Second B. Pharm. Examination unless he has passed in the remaining subject of the First B. Pharm. Examination held either in previous or in the same examination season.

Second B. Pharm.

O. 301-D: Every candidate for the admission to the second B. Pharm. examination shall be required to have passed the First B. Pharm. Examination of this University or of any other University recognised as equivalent thereto.

Candidates eligible for keeping terms at the Second B. Pharm. course according to O. 301 C. will also be admitted to the above course.

O. 301-E: A candidate who has failed to pass the Second B. Pharm. Examination may appear at the subsequent examination on the submission of a new application, the payment of a fresh fee and the production of a certificate that he has during the period between the declaration of his failure and subsequent reappearance for the examination, pursued courses of study in the subjects of the examination to the satisfaction of the Head of the Institution from which he appears.

R. 196-H: The course of study for the Second B. Pharm. Examination shall be of one year's duration consisting of two terms.

R. 196-I: There shall be an examination at the end of the Second Year called the Second B. Pharm. Examination.

R. 196-J.: Candidates for the Second B. Pharm. Examination shall be examined after they have satisfactorily completed the prescribed courses of study and kept two terms for the purpose at an affiliated college in the following subjects :

Scheme of Examination

<i>Subjects of Examination :</i>	<i>Total Marks for Theory including sessional :</i>	<i>Total marks for practical Exam. including sessional :</i>
1. Manufacturing Pharmacy and Microbiology.	100 marks	100 marks
2. Pharmaceutical Chemistry—I (inorganic, Physical and Analytical)	100 marks	Pract. I 100 marks
3. Pharmaceutical Chemistry—II (Organic)	100 marks	Pract. II 100 marks
4. Pharmacognosy	100 marks	100 marks
5. Physiology, Biochemistry and Hygiene	100 marks	100 marks
6. Drug Marketting	75 marks	—

N. B. : All written and Practical Examinations shall be of 3 hours' duration.

R. 196-K. : A regular record of both theoretical and practical class work and examination conducted at an affiliated college imparting training for this course shall be maintained for each student and 30 per cent of the total marks for each subject in theory and 40 per cent of the total marks for each subject in practical shall be allotted for these records. The sessional marks shall be calculated on the basis of average of the marks secured in examinations held during the year which shall not be less than three in numbers.

R. 196-L. : To pass an examination, candidates must obtain at least 40 per cent of the marks in Theory including sessional and Practicals including sessional, separately of each subject and in addition must obtain at least 50 per cent of the total marks assigned to the whole examination. No class will be awarded to the successful candidates at the second B. Pharm. Examination.

R. 196-M. : A candidate who has secured 50 per cent of the total marks in any subject (including sessional) at the second B. Pharm. Examination may, at his option, be exempted from appearing in that subject at a subsequent examination, provided he has passed in all the heads of passing in that subject and will be declared to have passed the whole examination when he has passed in all the remaining subjects and has obtained the total marks in those subjects as required under

R. 196. B. Candidates passing the examination in this manner by compartments will not be eligible for a class or prize or scholarship to be awarded at the examination.

O. 301-F.: A student who passes in all subjects but one at the II B.Pharm. Examination as mentioned in R. 196. J. will be allowed to keep terms and appear at the final B. Pharm. Examination after keeping two terms but will not be declared to have passed the final B. Pharm. Examination unless he has passed in that remaining subject of the second B.Pharm. held either in previous or in the same examination season.

FINAL B. PHARM. EXAMINATION.

O. 301 G :

Every candidate for the admission to the final B.Pharm. Examination shall be required to have passed second B.Pharm. Examination of this University or of any other University recognised as equivalent thereto. Candidates eligible for keeping terms at the final B.Pharm. course according to O 301 F. will also be admitted to the above course.

O. 301 H :

A candidate who has failed to pass the final B.Pharm. Examination may appear at the subsequent examination as an ex-student without keeping any fresh terms at a college on submission of a new application and payment of a fresh fee for the examination.

R. 196 O :

The courses of study for the final B.Pharm. Examination shall be of one year's duration consisting of two terms.

R. 196 P :

There shall be an examination at the end of third year called the final B.Pharm. Examination, which shall be held twice a year in April and October.

R. 196 Q :

Every candidate for the B. Pharm. degree shall be required to undergo at least three months practical training at any time after the end of the second B.Pharm. Examination at a recognised Pharmaceutical manufacturing concern or an analytical laboratory.

R. 196 R :

Candidates for the final B.Pharm. Examination shall be examined after they have satisfactorily completed the prescribed courses of study and kept two terms for the purpose at an affiliated college in the following subjects :

Scheme of Examination :

<i>Subjects of Examination</i>	<i>Total marks for Theory including Sessional</i>	<i>Total marks of practicals including Sessional</i>
1. Pharmaceutical Technology.	100 marks	100 marks of six hours.
2. Pharmaceutical Microbiology.	100 marks	100 marks of six hours.
3. Advanced Pharmaceutical Chemistry.	100 marks Practical I 100 marks Practical II	100 marks of six hours. 100 marks of six hours.
4. Advanced Pharmacognosy	100 marks	100 marks of six hours.
5. Pharmacology and Bioassays.	100 marks	100 marks of four hours.
6. Pharmacy Management.	100 marks	—

N.B. (1) All written Examinations shall be of 3 hours' duration.

(2) All practical examinations shall be six hours' duration except Pharmacology and Bioassay which shall only be of four hours' duration.

R. 196 S.

A regular record of both theoretical and practical class work and examination conducted at an affiliated college imparting training for this course shall be maintained for each student and 30 per cent of the total marks for each subject in theory and 40 per cent of the total marks for each subject in practical shall be allotted for these records. The sessional marks shall be calculated on the basis of average of the marks secured in examination held during the year which shall not be less than three in numbers.

R. 196 T :

To pass an examination, candidates must obtain at least 40 per cent of the marks in theory (including sessional) and practicals (including sessional separately of each subject and in addition must obtain at least 50% of the total marks assigned to the whole final B.Pharm. Examination.

Successful candidates shall be awarded classes as under after adding the marks (including sessional) obtained by them at all the three examinations viz. first B.Pharm., second B.Pharm. and the final B.Pharm. Examinations except marks obtained by them in subjects

viz. Dispensing Pharmacy, Forensic Pharmacy and Mathematics at the First B.Pharm. Examination :

Those obtaining 70 per cent and above — Distinction.

Those obtaining 60 per cent and above but
less than 70 per cent of the total marks } I Class.

Those obtaining 50 per cent and above but
less than 60 per cent of the total marks. } II Class.

Students passing by compartments will be declared to have passed the final B. Pharm. examination in the pass class.

(v) *Master of Pharmacy*.—A candidate for the examination for the degree of M. Pharm must have taken the degree of Bachelor of Pharmacy of this University or of any University recognised by this University (reciprocity essential) not less than 1½ academic years before appearing for the M. Pharm degree. The candidates will be examined in any two of the five subjects viz.

1. Pharmaceutical Technology (2 papers and 2 practicals.)
2. Pharmaceutics (2 papers and three practicals.)
3. Pharmaceutical Chemistry (2 papers and three practicals.)
4. Pharmacognosy (2 papers and practicals.)
5. Pharmacology (2 papers and 2 practicals.)

Candidates will have to submit thesis. In order to pass the examination the candidates must obtain at least 40 percent of the marks in theory papers of each subject, at least 40 percent of the marks in practicals in each subject and in addition must obtain at least 50 percent of the total marks assigned to the whole examination.

(vi) *B.Sc. and M.Sc. (Medical)*.—The University has introduced the courses of B.Sc. and M.Sc. (Med.) in the following branches :—

- I. Human Anatomy.
- II. Human Physiology.
- III. Pharmacology.
- IV. Pathology, Bacteriology and Parasitology.

The Examination for the B.Sc. (Med.) and M.Sc. (Med.) are held twice a year. The whole course for the B.Sc. (Med.) and M.Sc. (Med.) extends over a period of two years.

B.A.M.S. THE DEGREE COURSE IN AYURVEDA,

Index in general

Main Subjects :

1. Padartha-vijnan,
2. Sharir-rachna-vijnan,
3. Dosha-Dhatu-Mala-vijnan, Sharir-Kriya-vijnan,
4. Drvya-guna-sahstra with about 300 botanical plants and animal substance,
5. Sanskrit,
6. Swasthavritta,
7. Rasashastra.
8. Bhaishajya-Kalpana (with terminology & Pharmaceutical processes),
9. Kaya-chikitsa, Rasayan, Vajikaran, Roga-nidan & Pancha Karma,
10. Shalya-Shalakyas.
11. Visha-vijnan, Vyavaharayurveda OR Nyaya-vaidyak AND Sankramaka Rogas (Infectious diseases)
12. Prasuti-tantra and Stri-rogas
13. Kaumarabhritya-Balarogas,
14. Manovijnan, Manas-rogas AND their treatment,
15. History, Literature and gradual development of Ayurveda.

Note : The Medium of instruction in B.A.M.S. will be Gujarati.

O. 341. The following qualifications will be required for admission to any College imparting tuition in the course of Ayurvedic Medicine and affiliated to this University, for the students appearing at the B.A.M.S. degree examination.

At the time of admission the student shall have attained the age of 17 years or shall attain that age on or before the 10th of November of the year of his joining the college or on the day of the commencement of the Second term, whichever is later.

O. 341 A. Those who have passed the S.S.C., OR Matriculation examination with Sanskrit and have afterwards passed the Inter Science (Biology) examination of this University OR have passed the equivalent Inter Science examination of any other University, will be allowed admission to this course.

OR

O.341 B. A student who has passed the Inter Science (Biology) examination but has not passed the S.S.C. Examination with Sanskrit

but has passed the Sanskrit Prathama of Banaras OR an equivalent examination OR an examination in Sanskrit to the satisfaction of the Principal of the college he proposes to join, may be allowed admission to the Ayurvedic Medicine (B.A.M.S.) Course.

Note:—(When the University accepts the Higher Secondary Examination the eligibility for admission will be after passing that examination. When this alternative comes into force, the Pre-medical subjects like Biology, etc., will be taught in the first year).

O. 342. The Academic terms for B.A.M.S. course will be as follows :

First Term will begin on 20th June and will end on 10th October.

Second Term will begin on 10th Nov. and will end on 10th April.

The student admitted to the B.A.M.S. course will have to appear at the first examination after 3 *academic terms* and after passing that examination he will have to appear at the second examination after 3 *terms* and after passing that examination, he will appear at the Final B.A.M.S. Examination after 3 *terms*.

B.A.M.S. COURSE

Qualifications for Admission

O. 343. The student appearing at the first B.A.M.S. examination :—

A. shall have completed the course in the following subjects to the satisfaction of the Principal of the College :—

1. Padarth-vijnan,
2. Sharir-rachna-vijnan,
3. Dosha-Dhatu-Malavijnan (Sharir-Kriya-vijnan)
4. Dravyaguna shastra with 250 plants and 50 animal substances.
5. Sanskrit,
6. Swasthavritta and for that as shown in Reg. (1), the practical as well as oral examination should have been passed.

B. The student should have dissected one whole dead body to the satisfaction of his professor concerned.

C. The student should have passed the Sanskrit examination held by the College.

Note. The selection of botanical plants will be made every three years.

Reg. 222. W. The student admitted to the first year B.A.M.S. course under O.I. shall have to study the following subjects :—

	Lec.	Prac.	Written Marks	Time	Prac./Oral Marks	Time
1. Padarth-vijnan	50	x	100	3 hrs.		
2. Sharir-rachna vijnan	125	Dissection of one body	100	3 hrs.	100	½ hour
3. Dosha-Dhatu-Mala- vijnan Sharir-Kriya vijnan	125	75 experi- ments in Biochemis- try, Histo- logy & expe- rimental Physiology.	100	3 hrs.	100	½ hour
4. Dravyaguna Shastra with animal sub- stances	250	150				
5. Sanskrit	100	—	100	3 hrs.	—	—
6. Swasthavritta	50	—	50	2 hrs.	—	—

Note: The instruction in the above mentioned course :—

1. Will be given by lectures.
2. Must be subjectwise and there should be only one department — for ancient and modern — and not two separate ones.
3. Every subject should be taught with all recent advances.
4. There should be only one professor for one subject.
5. Only those professors who can show the predominance of Ayurveda with the comparative study of the Modern Medicine should be engaged.
6. The status of the student will be similar to that of the Modern Medical Graduate.

Reg. 223. The course for the examination subjects will be as follows :

1. Padartha-vijnan : 50 lectures, Written ; 100 marks, time 3 hours one question paper.
2. Sharir-rachna-vijnan : 125 lectures, practical, dissection of one body, written, one question paper, 100 marks, time 3 hours, Practical & Oral ; 100 marks, time ½ hour.

- | | |
|---|---|
| 3. Dosh-Dhatu-Mal-vijnan :
(Sharir-Kriya-vijnan) | 125 lectures, 70 experiments, written, 100 marks, time 3 hours, one question paper.
Practical and Oral—100 marks, time ½ hour. |
| 4. Dravyagunashastra :
with animal substances | 250 lectures, 150 practicals. |
| 5. Sanskrit : . | 100 lectures, 100 marks, 3 hours, one question paper. |
| 6. Swasthavritta : | 50 lectures, 50 marks, 2 hours, one question paper. |

Note : The fundamentals of Dravyagunashastra, the terminology ; of the plants together with their parts and sub-parts and 1/3 part of the study in general of the animal substances will be taken in the 2nd year of the B.A.M.S.

Reg. 224. The course for the first examination in B.A.M.S. will be as follows :—

SECOND B.A.M.S. COURSE

O. 344. No student who has not passed the first B.A.M.S. examination and who has not studied in the college-affiliated with this University for 1½ years or completed three terms after passing the examination will be admitted to the second B.A.M.S. course.

O. 345. Prior to admission in the examination of the Second B.A.M.S. the student for the course will be required to produce a certificate from the Principal for the satisfactory work in the following subjects :

1. Dravyaguna Shastra Remaining 1/3 part.
2. Rasa-Shastra.
3. Bhaishajya Kalpana
4. A. Manovijnan, Manas Roga and Chikitsa.
B. History of Ayurveda.
5. A. Vishvijnan and Vyavaharayurveda
B. Samkramaka Rogas.
6. A. Shalya Tantra.
B. Shalakya Tantra.
7. Kaya Chikitsa (with Nidan)
Rasayana Vajikaran and Panchakarma.

R. 225. The syllabus for the following subjects :

In the second B.A.M.S. will be as under :

1. Dravyaguna shastra
2. Rasa-shastra
3. Bhaishjya Kalpana Remaining 1/3 part
4. Manovijnan, Manasa Rogas and its chikitsa and History of Ayurveda.
5. Visha vijnan, Vyavaharayurveda and Samkramaka Roga.
6. Shalya Tantra and Shalakya Tantra.
7. Kayachikitsa, Rasayan and Vajikaran, Panchakarma (with Nidan).

O. 236. The syllabus of the Second B.A.M.S. examination will be as

1. Dravyaguna Shastra (remaining 1/2 part)
120 Lectures, 50 Demonstrations,
200 Marks — 2 question papers — Time 3 hours, each
2. Rasa-Shastra : 100 Lectures, 100 Demonstrations,
100 Marks — 1 question paper — Time 3 hours.
Practicals : 50 marks — Time 20 minutes.
3. Bhaishajya Kalpana :
100 Lectures, 100 Demonstrations,
100 Marks — 1 question paper — Time 3 hours.
Practicals : 50 marks — Time 20 Minutes.
4. A. Manovijnan, Manas Rogas and their treatment :

50 Lectures — 50 marks	}	Total
B. History of Ayurveda : 15 Lectures — 25 marks		Lectures : 65 Question paper : 1 Time : 3 hours Marks : 75
5. Vishvijnan Vyavaharayurveda and Sankramaka Rogas :

A. Vishvijnan Vyavaharayurveda 100 Lectures — 75 marks	}	Demonstrations : 50 Total marks : 100 Question Paper : 1 Practicals : 50 marks Time : ½ hour.
B. Sankramaka Rogas : 50 Lectures — 25 marks		
6. Shalya Tantra : Shalakya Tantra :

A. Shalya Tantra : 50 Lectures B. Shalakya Tantra : 25 Lectures	}	Rugnalaya Nirikshana for six months.
7. Kaya Chikitsa (Nidan), Rasayana, Vajikaran and Panchakarma :
Lectures : 150, Rugnalaya Nirikshana for any year.

THIRD B.A.M.S. COURSE

Eligibility for admission

O. 346. A student who has not passed the second B.A.M.S. examination, shall not be allowed to appear for the third B.A.M.S. examination of this University. The student desirous of appearing in this examination will be able to do so only after completing three academic terms.

O. 347. Before appearing for the third B.A.M.S. the student shall have to produce a certificate from the Principal of the college of having completed satisfactorily the below mentioned curriculum during three-academic terms :

1. Shalya Shalakyia Tantras (Remaining half portion) theory and practicals.
2. Kaya Chikitsa and Kumara Bhritiya (Bala Roga) (Remaining half portion) Theory and practicals. .
3. Prasuti Tantra and Stree Rogas: Theory and practicals.

R. 228. The study of the following curriculum will be required to be finished by any student desiring to appear at the Third B.A.M.S. Examination.

1. Shalya and Shalakyia Tantra (Remaining half portion).
2. Kaya Chikitsa and Kumara Bhritiya (Remaining half portion).
3. Prasuti and Stree Rogas.

R. 229. Following syllabus is to be followed for the third B.A.M.S. examination :

1. Shalya Shalakyia Tantra :

100 Lectures—Practicals; Clinical duty for one term.
Theory—One question paper—100 marks—3 hours.
Practicals and Oral—100 marks—1 hour (Clinical operation).

2. Kaya Chikitsa and Kumara Bhritiya: (Bala Roga) :

Lectures: 350. Practical: Clinical ward duty for 1½ terms.
Theory—Question papers: 2, — Marks: 200 — Time: 3 hours each.
Practicals: (Clinical and Oral) : Marks: 150—Time: 45 minutes.

3. Prasuti Tantra and Stree Roga :

Lectures: 100—Practicals: Half Term—10 deliveries.
Theory: Marks: 100—One question paper: 3 hours.
Practicals: (Clinical and oral) : 100 marks—½ hour.

R. 236. Detailed syllabus for the third B.A.M.S. examination will be as follows :

Prasuti Tantra and Stree Rogas : Artava dosha—its diagnosis and treatment.

Description of Suddha Shukra, Shuddha Artava, Diagnosis and treatment of excessive or scanty flow of menses. Shukra as causative factor of garbha (conception). Preliminary thing to be done before conception, Garbha-sthapana drugs. Things which are responsible for the death of the foetus. Fertilisation process, symptoms of sadyograhita garbha (recent conception) Reasoning regarding the origin of male and female child. Garbha (foetus) produced by good conditions of mother, father and satmya, rasa and manas according to Atreya. Counter opinion of Bhardvaja and Atreya's conclusion of the same. Description of the causes responsible for garbha, that which is called garbha, the things out of which garbha is produced, stages of foetus-formation in the womb. Causes of its growth, causes inhibitory to the foetus-formation, causes which bring forth the death of the foetus in the womb. Causes which are responsible for the disease or defect in the foetus. What part of the body of the foetus is produced first, the way in which the foetus lies in the womb. How the spirit transgresses inside the womb. Foetal circulation. Symptoms of the foetus—Male female or neutral. Causes of the illness of the foetus. Food and behaviour to be avoided in pregnancy. (Garbhinicharya) Causes of twin ; development of foetus from first month upto the birth. Causes of complications in the foetal life. Diagnosis and treatment with causes of diseases of pregnancy Nagodara Upavishtaka symptoms of asannaprasava. Garbhavatarana Prakriya, Method of preparing a labour room (sutigara) Process of delivery (Prasava vidhi) Diagnosis and treatment of Moodha Garbha. Post Partum treatment (Sutikopachar), Treatment of the new-born (Jatakarma), Nadi chhedana (cutting of the cord) Care of the infant, examination of the infant for the signs of his span of life. Examination of the wet nurse and her milk. Diseases of the milk. Treatment of diseased milk. Drugs which increase the milk.

Diseases of women : Diagnosis and treatment of painful menses, absent or scanty menses, excessive menses. Leucorrhoea, soma roga, yoni vyapti etc.

JAMMU AND KASHMIR UNIVERSITY

The constitutional set-up of the University was changed for the first time since its inception in the year 1948. A provision has been made in the University (Amendment) Act of 1956 for the appointment of a whole-time Vice-Chancellor and the mode of his appointment has also been prescribed. Besides the constitution of the Senate, Syndicate and other authorities has been amended to bring it generally in line with the recommendations of the University Education Commission.

Officers of the University

1. *The Chancellor*—Shri Yuvaraj Karan Singh Ji, Sadri-Riyasat.
2. *The Pro-Chancellor*—Bakshi Ghulam Mohammad, Prime Minister, Jammu and Kashmir State.
3. *The Vice-Chancellor*—Shri A. A. A. Fyzee.
4. *Honorary Treasurer*—Shri R. L. Gupta, Accountant-General, Jammu and Kashmir State.
5. *Registrar*—Shri Ghulam Mohammad.
6. *Deputy Registrar*—Sardar Bhagat Singh.
7. *Dean, Faculty of Arts*—Shri S. L. Pandit.
8. *Dean, Faculty of Science*—Shri Ghanshyam.
9. *Dean, Faculty of Education*—Shri Agha Ashraf Ali.
10. *Dean, Faculty of Oriental Learning*—Shri G. N. Mattoo.
11. *Dean, Faculty of Commerce*—Shri M. L. Shandilya.
12. *Dean, Faculty of Social Sciences*—Vacant.

The Chancellor is the head of the University and President of the Senate.

The Vice-Chancellor is a whole-time officer appointed by the Chancellor in the manner provided in the Act. He is also the principal executive and academic officer of the University.

The Registrar acts as the Secretary of the Senate, the Syndicate and of the Academic Board. He is a whole-time officer. He controls the University Office and conducts all important business.

Authorities of the University.

- (i) The Senate ;
- (ii) The Syndicate ;
- (iii) The Academic Board ;
- (iv) The School Board ;

- (v) The Faculties; and
- (vi) The Board of Inspection.

Senate.

The constitution of the Senate is :—

Class I. Ex-Officio Members

- (i) The Chancellor ;
- (ii) The Pro-Chancellor ;
- (iii) The Vice-Chancellor ;
- (iv) Ministers of the Jammu and Kashmir Government ;
- (v) Judges of the High Court of the Jammu and Kashmir State ;
- (vi) Speaker of the Jammu and Kashmir State Assembly ;
- (vii) Director of Education ;
- (viii) The Treasurer ;
- (ix) Deans of Faculties ;
- (x) Members of the Syndicate of the University not otherwise on the Senate ;
- (xi) Principals of Colleges in which instruction is given upto Degree standard ;
- (xii) Registrar ;
- (xiii) Ten Public Servants, namely :—
 1. Chief Secretary ; Jammu & Kashmir State ;
 2. Education Secretary, Jammu & Kashmir State ;
 3. Director Public Health, Jammu & Kashmir State ;
 4. Director of Agriculture, Jammu & Kashmir State ;
 5. Director, Drug Research Laboratory, Jammu ;
 6. Chief Engineer, Public Works Department, Jammu & Kashmir Government ;
 7. Finance Secretary, Jammu & Kashmir Government ;
 8. Director, Botanical Research, Jammu & Kashmir Govt. ;
 9. Chief Inspectress, Women's Education, Jammu & Kashmir State ;
 10. Chairman, Legislative Council, Jammu and Kashmir State.

Class II. Other Members.

- (i) Headmasters of High Schools, one in each Province (Jammu and Kashmir) for every twenty boys' High Schools or a fraction thereof if it exceeds ten, to be elected by graduate teachers of High Schools of the Province with at least three years' experience as teachers; and Headmistresses, one from each Province, to be elected by graduate teachers of Girls' High Schools of the Province.

Explanation : For purposes of this sub-section, 'Headmasters' includes 'Principal or Vice-Principal' of a Multipurpose or Multilateral High School or Higher Secondary School.

- (ii) Two teachers to be elected by the teachers teaching in colleges other than Degree colleges.
- (iii) Four teachers to be elected by teachers of Degree colleges ;
- (iv) Teachers in University service, one for every ten such teachers or a fraction thereof if it is five or more to be elected by such teachers ;
- (v) Four persons nominated by the Jammu and Kashmir State Assembly ;
- (vi) Five graduates elected by the registered graduates from among their own body ; and
- (vii) Five persons to be nominated by the Chancellor to represent interests not otherwise represented.

The Senate is the supreme governing body of the University and exercises the following powers :—

- (a) of making Statutes, and of amending or repealing the same ;
- (b) of considering and passing resolutions on the annual report, the annual accounts and the financial estimates.

Syndicate.

The Syndicate is the executive body of the University and consists of :

Class I. Ex-officio Members.

- (i) The Vice-Chancellor ;
- (ii) The Minister of Education, Jammu & Kashmir State or his nominee ;
- (iii) The Director of Education, Jammu & Kashmir State ;
- (iv) Three Deans of Faculties to be nominated by the Vice-Chancellor for a period of two years ;
- (v) the Treasurer.

Class II. Other Members.

- (i) Three members of the Senate (elected by the Senate at its annual meeting), of whom at least one shall be registered graduate elected to the Senate by the registered graduates from among their own number ;
- (ii) One Principal of a Degree College, to be nominated by the Vice-Chancellor by rotation for a period of two years ;
- (iii) Two members elected by the Academic Board from its own body ; and

- (iv) Five persons nominated by the Chancellor of whom two (including one women) shall be connected with academic life.

Academic Board.

The Academic Board is responsible for the maintenance of standards of teaching and examination within the University and advises the Syndicate concerning all questions relating to courses of studies excepting in the cases of Matriculation and Higher Secondary Examinations. It consists of :—

- (i) The Vice-Chancellor ;
- (ii) The Deans of Faculties ;
with powers to co-opt not more than 5 persons possessing special knowledge of subject not otherwise adequately represented on the Academic Board ;
- (iii) The Heads of Departments of the subject in which the University conducts Post-graduate courses who have the status of University Professors or Readers.

School Board.

The School Board consists of :—

- (i) The Director of Education, Jammu & Kashmir State, Ex-Officio Chairman ;
- (ii) The Deputy Director of Education, Jammu and Kashmir State, Ex-Officio Member ;
- (iii) The Chief Inspectress of Women's Education, Jammu and Kashmir State, Ex-Officio Member ;
- (iv) The Registrar ;
- (v) One member from each of the Faculties of Arts, Science, Social Sciences and Education.
- (vi) Two provincial Inspectors of Schools in-charge of the boys education in the two Provinces (Jammu & Kashmir) ;
- (vii) One Headmaster of a High School in the Ladakh District nominated by the Director of Education ;
- (viii) Headmasters and Headmistresses, who have been elected as such to the Senate ;
- (ix) One member each representing the Senate and Syndicate other than (i) to (viii) above.

The duties of the School Board are :—

- (a) to consider all questions relating to the Matriculation or Higher Secondary Certificate Examinations ;

- (b) to recommend Courses of Study and Reading and Syllabi for the Matriculation or Higher Secondary Certificate Examinations ;
- (c) to consider all objections raised by the Headmasters to questions set at these examinations.

The Faculties.

At present there are six Faculties, viz. Arts, Science, Social Sciences, Education, Commerce and Oriental Learning.

The maximum number of members constituting each Faculty is 20 each in Arts and Science Faculties and 10 each in the Faculties of Education, Social Sciences, Commerce and Oriental Learning.

Under each Faculty the following Boards of Studies have been constituted :—

(A) *Faculty of Arts.*

1. English and Philosophy ;
2. Sanskrit, Hindi and Panjabi ;
3. Persian, Arabic and Urdu ;
4. Indian Music ;
5. Economics ;
6. History, Political Science and Civics ;
7. Domestic Science and Education.

(B) *Faculty of Science.*

1. Physics ;
2. Chemistry ;
3. Botany ;
4. Zoology ;
5. Mathematics ;
6. Geology ;
7. Geography.

(C) *Faculty of Education.*

1. Education.

(D) *Faculty of Social Sciences.*

No Boards constituted at present.

(E) *Faculty of Commerce.*

Commerce.

(F) *Faculty of Oriental Learning.*

1. Sanskrit, Hindi and Panjabi.
2. Arabic, Persian and Urdu.

EXAMINATIONS

The University at present conducts the following examinations :

1. M.A. & M.Sc.
2. B.A. & B.Sc. and B.A. (Hons.)
3. B.Ed.
4. F.A. and F.Sc.
5. I.Com.
6. Matriculation.
7. Proficiency, High Proficiency and Honours Examinations in Hindi, Urdu, Panjabi, Arabic, Sanskrit & Persian.

The entrance qualifications for each of these examinations are as under :—

For M.A. & M.Sc.	.. ..	B.A. and B.Sc. with relevant elective subjects.
For B. Ed.	.. .	B.A. or B.Sc.
For B. A. and B.Sc.	. .	F A and F.Sc.
For F.A. and F.Sc.	.. ..	Matriculation, with Science in the case of F.Sc.
I.Com.	.. .	Matriculation.
For Proficiency, High Proficiency and Honours Examinations.		No entrance qualifications are necessary, except that in the case of Honours in Sanskrit a candidate must have passed High Proficiency Examination in Sanskrit and for Honours in other subjects a candidate must have passed any University Examination.

The duration of each course of study is as under :—

M.A. and M.Sc.	.. ..	2 years
B.A. and B.Sc.	.. ..	2 years
B.Com.	.. ..	2 years
F.A. and F.Sc.	.. ..	2 years
I.Com.	.. ..	2 years
Matriculation	.. ..	2 years in High Classes, one in each 9th and 10th.
Proficiency, High Proficiency and Honours Examinations	.. ..	Usually one year.
B.Ed.	.. ..	One year.

In the year 1956, 10,420 candidates appeared to these examinations, out of which 4,961 were declared successful.

AFFILIATION

The number of High Schools recognised by the University is 116. The Colleges affiliated to the University are as under :—

A. *Arts and Science Colleges.*

1. Teachers Training College, Srinagar ;
2. Teachers Training College , Jammu ;
3. Amarsingh College, Srinagar ;
4. S. P. College, Srinagar ;
5. Govt. College for Women, Srinagar ;
6. Govt. College for Women, Jammu ;
7. Gandhi Memorial College, Srinagar ;
8. St. Joseph's College, Baramulla, Kashmir ;
9. Government College, Sopore, Kashmir ;
10. Government College, Anantnag, Kashmir ;
11. Government College, Bhadarwah, Jammu ;
12. Government College, Poonch, Jammu ;
13. Government Gandhi Memorial Arts College, Jammu ;
14. Government Gandhi Memorial Science College, Jammu ;
15. S. P. M. Rajput College of Commerce, Jammu.

B. *Oriental Colleges.*

16. Shri Raghunath Sanskrit Mahavidyalaya (Oriental College). Jammu ;
17. Jamia Madinat-ul -Alum (Oriental College), Hazratbal, Srinagar ;
18. Nasrat-ul-Islam Oriental College, Srinagar ;
19. Govt. Oriental College, Srinagar ;
20. Mahila Mahavidyalaya (Oriental College), Srinagar ;
21. Rupa Devi Shardha Peeth (Oriental College), Srinagar ;
22. Hindu Kanya Mahavidyalaya (Oriental College), Srinagar ;
23. Vishwa Bharati Kanya Mahavidyalaya (Oriental College), Srinagar ;
24. Sanatan Dharm Kanya Vidyalaya (Oriental College), Jammu ;
25. Vidya Peeth Mahila Oriental College, Jammu.

The total number of students reading in the High Schools and Colleges for the year 1956 is as under :—

High Schools	..	..	9733
Arts and Science Colleges	..	..	4735
Training Colleges	..	..	157
Commerce Colleges	..	..	79
Oriental and Modern Indian Languages colleges	..	..	563

The sources of income and the estimates of receipts and expenditure for the year (1956-57) are as under :—

(i) Examination Fees	..	..	..	2,54,500
(ii) Fees other than Examination	..	..	..	10,550
(iii) Miscellaneous receipts	..	..	..	34,900
(iv) Government grant	..	..	..	1,00,000
				<hr/>
				3,99,950
Add for rounding	..	..	..	50
				<hr/>
Total			Rs.	4,00,000
				<hr/>
Expenditure			Rs.	4,10,863

Facilities for Post-graduate study in M.A. English and Economics and M.Sc. Geology exist at present.

Library.

The Library contains about 25,000 volumes.

KARNATAK UNIVERSITY

INTRODUCTORY

In response to a longstanding demand for a separate University for Karnatak and in conformity with the principle of establishing regional Universities in the State of Bombay, the Government of Bombay appointed the Karnatak University Committee on 17th April, 1947, under the Chairmanship of Mr. Justice N. S. Lokur, then a Judge of the High Court of Bombay. The Karnatak University Bill, based on the recommendations of the Committee was passed by the Bombay Legislature in April, 1949, (Bombay Act No. XX of 1949). The University Office actually started working in the month of July 1949 in the Town Hall, Bombay. The Office was shifted to Dharwar in October, 1949, when the Government of Bombay lent a part of the building of the Government Training College for Men, Dharwar. Later, Government gave the whole building for the University. In the meantime, Government also made a gift of a site measuring about 300 acres known as Chhotamahabaleshwar, about 2 miles away from the city of Dharwar for the construction of the Buildings of the University.

At present, the Administrative Building for the office of the University, the Vice-Chancellor's lodge, and residential quarters for the Registrar, the Assistant Registrar and University Professors and Readers have been constructed on the Chhotamahabaleshwar hills. The main University building which will accommodate the various post-graduate Departments, laboratories, library, museum, etc. is under construction. The foundation stone of this building of the University was laid by the Minister for Education, Government of Bombay, Shri Dinkarrao Desai, on the 14th of January, 1955. It is estimated that the whole building will cost about Rs. 35 lakhs. It is also proposed to construct a hostel costing about Rs. 6 lakhs.

Under the provisions of the Karnatak University Act, the post-graduate teaching and research is the direct responsibility of the University. Accordingly, in June 1952 the Departments of (1) Kannada Language and Literature and (2) Statistics were started. In June 1953 the Department of Chemistry was started and the Department of Physics came into being in October, 1953. The Department of Geology started functioning from January 1955. The Department of History and the Department of Economics started functioning from August 1955.

The University has prepared a Five Year Plan of Development under which it is proposed to start the Departments of Hindi, Sanskrit and Prakrit Languages, Education, Sociology, Urdu and Persian, English, Philosophy and Linguistics under the Humanities and the Departments of Physical Chemistry, Mining & Metallurgy, Geography, Botany and Zoology on the technical and scientific side.

CONSTITUTION OF THE UNIVERSITY.

(1) *The University*

The Chancellor, the Vice-Chancellor, the members of the Senate, the Syndicate and the Academic Council constitute the body corporate of the University. The main duties and functions of the University are to provide for instruction, teaching and training in such branches of learning and courses of study as it may think fit and to make provision for research and supervise the teaching in colleges and recognized institutions, to institute degrees, titles, diplomas and other academic distinctions, to hold examinations and confer degrees, titles and diplomas and other academic distinctions, to inspect colleges and recognized institutions and to take measures to ensure that proper standards of instruction, teaching and training are maintained, to control and co-ordinate the activities of and give financial aid to affiliated colleges and recognized institutions, to hold and manage endowments, and to institute and award fellowships, scholarships, exhibitions, medals and prizes and all other acts to cultivate and promote arts, science and other branches of learning and culture.

All educational institutions imparting higher education situated within the University area i.e. the Districts of Dharwar, Belgaum, Bijapur and North Kanara are affiliated to the University. Colleges situated outside this area can be affiliated to this University with the concurrence of the Governments concerned.

(2) *Officers of the University*

Under the University Act, the following are the Officers of the University :

- (i) The Chancellor,
- (ii) The Vice-Chancellor,
- (iii) The Deans of Faculties,
- (iv) The Registrar and
- (v) Such other officers of the University as are declared by the Statutes to be officers of the University.

(3) *Authorities of the University*

The following are the authorities of the University :

- (i) The Senate,
- (ii) The Syndicate,
- (iii) The Academic Council,
- (iv) The Faculties,
- (v) The Board of University Teaching,

(vi) *The Boards of Studies and*

- (vii) Such other bodies as may be declared by the Statutes to be authorities of the University.

The Senate: The Senate is the general body, the main duties and functions of which are—to provide for instruction, teaching and training in such branches of learning and courses of study as it may think fit for research and for the advancement and dissemination of knowledge etc., to consider and pass Resolutions on the Annual Report, Annual Accounts and the Financial Estimates as prepared by the Syndicate and to elect office bearers and authorities as provided in the Act and the Statutes.

The Syndicate: The Syndicate is the executive body of the University and consists of the Vice-Chancellor (ex-officio Chairman), the Director of Education or the Deputy Director of Education, who is a member of the Senate (ex-officio), eight persons elected by the Senate from among its members and five persons elected by the Academic Council from amongst its members to represent the different Faculties.

The Academic Council: The Academic Council is the academic body of the University and consists of the Vice-Chancellor (ex-officio Chairman), the Deans of the various Faculties, Heads of the University Departments, Principals of Degree Colleges, Chairmen of the Boards of Studies, Heads of the Recognized institutions and four members elected by the Senate from among its members. The Academic Council is responsible for the maintenance of the standards of teaching and examinations within the University.

Faculties and Boards of Studies

There are at present the following Faculties: (i) Arts, (ii) Social Sciences, (iii) Science, (iv) Law, (v) Engineering, (vi) Agriculture and (vii) Medicine.

Each Faculty elects its own Dean, whose term of office is for one year.

There are at present 25 Boards of Studies grouped under different subjects or groups of subjects.

Post-graduate Teaching: All post-graduate teaching and training within the University area is to be conducted by the University direct or through its affiliated colleges on behalf of the University. The Board of University Teaching co-ordinates post-graduate training and teaching in the University area. Teachers on the staff of the affiliated colleges and recognized institutions are recognized for purposes of imparting post-graduate instruction on the recommendation of the Committees for Recognition of Teachers of the University.

The appointment of Examiners at the various examinations of the University is made by the Syndicate on the recommendations of the

Committee for appointment of examiners for each of the Faculties mentioned above.

There is a Legal Advisory Committee to advise the University on matters concerning legal issues. There is a Financial Advisory Committee to advise the Syndicate and other authorities of the University on financial matters.

Scholarships and Prizes

For the present, prizes of the value of Rs. 150/- and Rs. 100/ each are awarded out of the University funds to students standing highest with at least 55 per cent of marks in the total or in the total which determines Honours at the Degree and under-graduate examinations. No prize will be awarded out of the University funds if there is provision for the award of the prize out of an endowment received for the purpose. The following is the list of prizes, scholarships and Gold Medals awarded by the University out of the endowments received for the purpose from the public :

1. "The Shri K. H. Kabbur Scholarship" of the monthly value of Rs. 25 is awarded to the student who stands first among the successful candidates at the B.Sc. Degree Examination with Chemistry as the Principal subject and who continues further studies either for the M.Sc. at the Karnatak University or for the B.Sc. (Tech.) Course of the Bombay University.
2. "The Principal M. V. Donde Scholarship" of the value Rs. 30 per month is awarded every year to a son or a daughter of a Primary School Teacher outside Bombay City who secures the highest number of marks at the S.S.C. Examination or at the Entrance Examination of the Karnatak University holds such an examination provided he or she prosecutes his or her studies in any college affiliated to the Karnatak University.
3. "The Shri Krishna Raddi B. Bhadrapur Retired Collector Essay Prize" of the value of Rs. 100 in cash is awarded for the best essay on a subject connected with the linguistic, social or political unification of Karnatak and thereafter on a problem peculiar to Karnatak.
4. "The Shri Krishna Raddi B. Bhadrapur Retired Collector Prize" of the value of Rs. 100 in cash is awarded to the candidate standing highest at the S.S.C. Examination among the successful candidates from the village Nalvadi (Taluka Navalgund, District Dharwar), provided he/she prosecutes his/her studies in any of the colleges affiliated to the Karnatak University.
5. "The Shri Krishna Raddi B. Bhadrapur Retired Collector Prize" of the value of Rs. 100 in cash is awarded to the candidate stand-

ing highest at the S.S.C. Examination among the students appearing from the Centres situated within the jurisdiction of the Karnatak University provided he/she prosecutes his/her studies in any of the colleges affiliated to the Karnatak University.

6. "The Dharwar Bar Association Prize" of the value of Rs. 100 in cash is awarded to the student who secures the highest number of marks at the First LL.B. Examination obtaining at least 60 per cent of the total marks.
7. "The Gururao Annarao Jamkhandi Prize" of the value of Rs. 100 in cash is awarded to the student who passes the B.A. Degree Examination at least in the Second Class securing the highest number of marks in Philosophy, particularly Indian Philosophy and if such a candidate is not available, to a candidate securing the highest number of marks in the following subjects in order of priority :
 - (a) Sanskrit Literature or (b) History or (c) Politics, (d) Economics or (e) any other subject at the discretion of the Vice-Chancellor.
8. "The Shri K. H. Kabbur Prize" of the value of Rs. 100 in cash is awarded to the student who stands first among the successful candidates at the B.Com. Examination securing at least 50 per cent of the marks in the total.
9. "The Kumari Indubala Laxmidas Patel Prize in Physics" of the value of Rs. 100 (in the form of books on technical subjects) is awarded to the student standing first in Physics at the Intermediate Science Examination.
10. "The Dr. M. S. Wagle Prize" of the value of Rs. 100 in cash is awarded to the student standing first at the Intermediate Science Examination (B) group with at least 50 per cent of the total marks provided the candidate takes up the M.B.B.S. Course either in this or any other University whose examinations have been recognized by the Karnatak University.
11. "The Gangadhar Hanshetti Memorial Gold Medal" is awarded to the candidate who passes the B.Com. Examination with the highest number of marks.
12. "The Sir Gurunath Bewoor Memorial Prize" of the value of Rs. 100 is awarded every year to a student who stands first among the candidates appearing for the B.A. Examination of the Karnatak University in Sanskrit Honours.
13. "The Vasudev Raghunath Kasbekar of Ankola Gold Medal" is awarded every year to a lady student who passes the final

M.B.B.S. Examination obtaining the highest number of marks among the lady students and securing not less than 55 per cent of the aggregate number of marks for the said examination.

14. "The Rao Saheb Siddappa Manturshettar Gold Medal" is awarded every year to a student passing the B.A. (Special) Examination with English as the Special subject at least in the second class with 50 per cent of the maximum number of marks in all the papers in English including the compulsory Papers and securing the highest number of marks.

In addition to the above prizes and gold medals, the University has instituted the following studentships each of the monthly value of Rs. 50 to be awarded to students registering for the various post-graduate courses of the University. The minimum qualification for being eligible to get a studentship of the University is a second class and 50 per cent of the marks at the Degree Examination :

1. Kannada	Two
2. Sanskrit	One
3. English	One
4. Philosophy	One
5. History and Economics	Three
6. Mathematics Group 'A'	One
7. Mathematics Group 'B'	One
8. Mathematics Group 'C'	
(Statistics)	Two
9. Physics	Two
10. Chemistry	Two
11. Botany	One
12. Geology	One

In addition some Scholarships and Fellowships of the Government of India and Bombay are also available to the students.

If for some reasons a studentship remains unawarded, the same will be awarded to a deserving student in any other subject.

University Library: The University has a well equipped library catering to the needs of the students and teachers. (25,000 volumes) Open access system is followed in the library. Books are issued to the members of the various authorities of the University and to the teachers of the University. Books are being issued to the students for purposes of study in the premises of the Library only. The Library is housed at present in the building of the Government Training College for Men, where the University had been housed formerly.

University Publication Board: The University has a Board of Publication consisting of the Vice-Chancellor as Chairman, six members nominated by the Syndicate to represent the different Faculties and three members appointed for their expert knowledge and experience.

Among the duties of the Board are to recommend to the Syndicate the publication grants of the University and to undertake printing of text-books and books of popular interest.

Board of Extra-mural Studies: The University has a Board of Extra-mural Studies which is appointed by the Syndicate. Lectures on scientific and technical subjects are held for the benefit of the general public in the University area. The lectures delivered under the auspices of the Board are published in brochure form by the University.

Board of Sports: The University has a Board of Sports. The objects of the Board are to organise, control, manage or supervise the Inter-Collegiate Sports and Tournaments within the jurisdiction of the University and to foster, undertake and conduct Inter-University competitions.

Inter-Collegiate Sports Meets are arranged every year under the auspices of one particular affiliated college. Such Meets are arranged by the Board of Sports. The University also participates in the Inter-University Sports activities.

Hostels: The University has made arrangements for the residence of about 50 post-graduate students at present.

The University awards the following Degrees and Diplomas at present:

(i) B.A. (General & Special), (ii) M.A., (iii) B.Ed., (iv) M.Ed., (v) B.Com., (vi) B.Sc., (vii) M.Sc., (viii) LL.B., (ix) LL.M., (x) B.E. (Civil) (xi) B.Sc. (Agri.), (xii) M.Sc. (Agri.) (xiii) M.B.B.S., (xiv) Ph.D. in the Faculties of Arts, Social Sciences, Science and Agriculture, (xv) Diploma in Teaching.

The facilities that are available at present to students in the various Post-graduate Departments of the University are as under:

1. **Department of Kannada:** Students are admitted to the M.A. Course which is of two years' duration after graduation. Students are also admitted to the Ph.D. Course on subjects pertaining to the Kannada language and literature. The minimum qualification for admission to the Department is a B.A. of this University or of any other University recognized by this University.

The Department has undertaken the work of compiling "A History of Kannada Literature". Many eminent scholars have been requested

to contribute articles on various topics concerning Kannada literature. The synopsis of the proposed work has been recently published. The editing and compilation of the work will be taken up after the articles are received.

2. *Department of Statistics*: Provision for teaching the M.A. and M.Sc. Courses, both of two years' duration, is made in this Department at present. The minimum qualification for admission to the Department is B.A. or B.Sc. of this University or any other University recognized by this University.

3. *Department of Chemistry*: Students are admitted to the M.Sc. Course which is of two years' duration, both by Papers and by Research. At present provision is made for imparting instruction in Organic Chemistry only. On an average 10 students are admitted to the M.Sc. Course by Papers while 5 are admitted to the course by Research every year. Provision is also made for guiding students for the Ph.D. Course. The minimum qualification for admission to the Department is B.Sc. of this University or any other University recognized by this University.

4. *Department of Physics*: Provision has been made for admission of students to the M.Sc. Course which is of two years' duration both by Papers and by Research. Provision also exists for guiding students for the Ph.D. Degree. At present arrangement is made for research in Spectroscopy only. The University has made provision for teaching M.Sc. Course in Electronics (Radio Physics) at the Lingaraj College, Belgaum. The minimum qualification for admission is B.Sc. of this University or of any other recognized University.

5. *Department of Geology*: At present provision has been made to admit students for the M.Sc. course by Research, which is of two years' duration after graduation. The minimum qualification for admission is B.Sc. of this University or of any other University recognized by this University.

6. *Departments of Economics & History*: The Departments of Economics and History were started recently. Admissions have already been made for the M.A. Course by Papers which is of two years' duration after graduation.

AFFILIATED COLLEGES AND RECOGNIZED INSTITUTIONS

1. *Karnatak College, Dharwar. (Estd. 1917).*

Principal: V. K. Gokak, B.A. (Oxon).

The College is permanently affiliated to teach:—

- (1) Courses leading to the B.A. (General and Special) degree examination in Kannada, Sanskrit, Persian, Mathematics, History, Economics and Philosophy.

- (2) Courses leading to the B.A. (General) Degree Examination in Pali, French and Urdu.
- (3) Courses leading to the B.Sc. Degree Examination in Zoology (Principal and Subsidiary), Botany (Principal and Subsidiary) and Mathematics (Principal and Subsidiary).

The College is also affiliated to teach :—

- (4) Courses leading to the B.Sc. (Subsidiary) and the B.A. (General) Degree Examination in Geography.
- (5) Courses leading to the B.Sc. Degree examination in Chemistry (Principal & Subsidiary) and courses leading to the B.A. Degree (General & Special) Examination in Marathi.

The College has hostel accommodation for about 200 students including 35 lady students.

2. Lingaraj College, Belgaum (Estd. 1933)

Principal : G. S. Paramasivayya, M.Sc., M.I.R.E.

The College is permanently affiliated to teach :—

- (1) Courses leading to the B.Sc. Degree Examination in Physics (Principal and Subsidiary), Chemistry (Principal and Subsidiary), Mathematics (Principal and Subsidiary) and Botany (Subsidiary).
- (2) Courses leading to the B.A. Degree Examination (General and Special) in English, Sanskrit, Marathi, Kannada, Ardhamagadhi, Mathematics, Philosophy and Economics.
- (3) Courses leading to the Diploma in Teaching.

The College is also affiliated to teach the following courses leading to :—

- (i) B.A. Degree (General) in Hindi
- (ii) Law Preliminary Course.

Hostel accommodation for about 215 students including 35 lady students is available.

3. Raja Lakshmagouda Law College, Belgaum. (Estd. 1939).

Principal : V. R. Bhat, M.A., LL.M.

The College is affiliated to teach the courses leading up to the LL.B. Degree Examination.

Provision also exists for guiding students for the LL.M. Degree Course.

4. *Secondary Teachers' College, Belgaum (Estd. 1939).*

Principal: S. V. Jevoor

The College is permanently affiliated to teach the courses leading to the Degree of Bachelor of Education.

Provision also exists in the College for training students for the M.Ed. Degree Course.

5. *Janata Shikshana Samiti's Science and Banashankari Arts College, Dharwar. (Estd. 1944).*

Principal: R. Y. Dharwadkar, M.A.

The College is affiliated to teach courses leading to:—

- (1) B.A. Degree Examination (General and Special) in English, Kannada, Sanskrit and Economics.
- (2) B.A. Degree Examination (General) in Philosophy, History and Ardhamagadhi.
- (3) Intermediate Science Groups 'A' and 'B'.

The College has a hostel for students.

6. *Basaveshwar College, Bagalkot. (Estd. 1944).*

Principal: S. C. Nandimath, M.A., Ph D (London).

The College is affiliated to teach courses leading to:—

- (1) B.A. Degree Examination (General) and (Special) in English, Kannada, Sanskrit and Economics.
- (2) B.A. Degree Examination (General) in Ardhamagadhi and Philosophy.
- (3) B.Sc. Degree Examination in Chemistry (Principal) and Physics and Botany (Subsidiary).

Hostel accommodation for 150 students is available.

7. *Vijay College, Bijapur. (Estd. 1945).*

Principal: T. K. Patil, M.A. (London)

The College is affiliated to teach the courses leading to:

- (1) B.A. Degree Examination (General and Special) in English, Economics and Kannada.
- (2) B.A. Degree Examination (General) in Politics, Philosophy, Sanskrit, Ardhamagadhi, Persian, Mārathi, History and Statistics.
- (3) B.Sc. Degree Examination in Chemistry (Principal), Physics and Zoology (Subsidiary).

Hostel accommodation for 150 students is available.

8. *Rani Parvatidevi College, Belgaum (Estd. 1945).*

Principal: T. K. Deolalkar, B.A., B.Sc.

The College is affiliated to teach courses leading to

- (1) B.A. Degree Examination (General & Special) in English, Marathi and Economics.
- (2) B.A. Degree Examination (General) in French, Portuguese, Kannada, Sanskrit, Ardhamagadhi, Philosophy, History and Politics.
- (3) B.Sc. Degree Examination in Chemistry, Botany (Principal & Subsidiary), and Physics (Subsidiary.)
- (4) B.A. (General & Special) in Mathematics, B.Sc. Mathematics (Principal).

Hostel accommodation for 130 students including 30 lady students is available.

9. *College of Agriculture, Dharwar. (Estd. 1947).*

Principal: S. W. Mensinkai, M.A., Ph.D. (London).

The College is permanently affiliated to teach courses leading to the B.Sc. (Agri) Degree Examination. There is also provision for guiding students for the M.Sc. (Agri) and Ph.D. Degrees in some subjects.

Hostel accommodation for 120 students is available.

10. *Jagadguru Gangadhar College of Commerce, Hubli. (Estd. 1947).*

Principal: C. C. Pattanshetti, M.A., Ph.D.

The College is affiliated to teach courses leading to the B.Com. Degree Examination with the following optional subjects:

- (i) Advanced Accounting and Auditing.
- (ii) Advanced Banking.
- (iii) Statistics.

Hostel accommodation for 45 students is available.

11. *B. V. Bhoomaraddi College of Engineering, Hubli. (Estd. 1945).*

Principal: A. S. Menon, B.Sc. (Eng.)

The College is affiliated to teach courses leading to the B.E. (Civil) Degree Examination. Hostel accommodation for 50 students is available. A few Diploma courses are also taught.

12. *Kanara College, Kumta. (Estd. 1949).*

Principal: L. S. Kamat, M.A., LL.B.

The College is affiliated to teach courses leading to

- (1) B.A. Degree Examination (General & Special) in Sanskrit, History, Economics and Kannada.

(2) B.A. Degree Examination (General) in English, Mathematics and Philosophy in the branch of Psychology.

(3) B.Sc. Degree Examination in Chemistry (Principal) and Physics (Subsidiary).

Hostel accommodation for about 75 students is available.

13. *Shri Kadasiddheshwar College, Hubli. (Estd. 1952).*

Principal: D. S. Karki, M.A., Ph.D.

The College is affiliated to teach courses leading to the B.A. (General & Special) degree in Kannada and the B.A. (General) degree in Economics and Psychology.

14. *Kasturba Medical College, Manipal (Estd. 1953).*

Principal: M. V. Ramanamurti, M.B.B.S., F.R.C.S. (Edin.).

The College is affiliated to teach the courses leading to the M.B.B.S. Degree.

15. *Janata Shikshana Samiti's Law College, Dharwar. (Estd. 1954).*

Principal: N. R. Kulkarni, M.A., LL.B.

The College is affiliated to teach courses of study leading to the Law Preliminary and the 1st LL.B. Examinations.

16. *Karnatak Law Society's College of Commerce, Belgaum. (Estd. 1954).*

Principal: V. S. R. Murti, M.Com.

The College is affiliated to teach courses leading to the B.Com. Degree with the following optional group of subjects.

- (i) Accountancy and Auditing.
- (ii) Banking.
- (iii) Public Finance.
- (iv) Statistics Group 'D'.

17. *Kannada Research Institute, Dharwar. (Estd. 1939).*

Director: S. S. Malwad, M.A.

The Institute is recognized permanently to guide students for post-graduate degrees in (1) Ancient Indian History and Culture (Archaeology, Epigraphy and Culture), (2) Kannada Language & Literature and (3) Sociology.

Of the institutions mentioned above, the following are run by the Government of Bombay:

- (1) Karnatak College, Dharwar.
- (2) College of Agriculture, Dharwar.
- (3) Kannada Research Institute, Dharwar.
- (4) Secondary Teachers' College, Belgaum.

Other institutions are run by private societies.

OFFICERS AND STAFF OF THE UNIVERSITY

Chancellor: Dr. H. E. Hare Krushna Mahtab, Governor of Bombay.

Vice-Chancellor: Shri D. C. Pavate, M.A. (Cantab).

Registrar: Shri M. S. Bagali, B.A., LL.B.

Assistant Registrar: Shri S. S. Wodeyar, M.A., LL.B.

Librarian: Shri K. S. Deshpande, M.A., Dip. Lib.

Deans of Faculties :

- | | |
|--------------------------|--|
| <i>Arts :</i> | Prin. V. K. Gokak B.A. (Oxon),
Karnatak College, Dharwar. |
| <i>Social Sciences :</i> | Prof. T. Reuben, M.A.,
Vijay College, Bijapur. |
| <i>Science :</i> | Prof. N. R. Tawde, M.Sc., Ph.D. (London),
Head of the Department of Physics,
Karnatak University, Dharwar. |
| <i>Law :</i> | Prof. V. A. Mujumdar, B.A., LL.B.,
R. L. Law College, Belgaum. |
| <i>Agriculture :</i> | Prin. S. W. Mensinkai, M.Sc., Ph.D. (London),
College of Agriculture, Dharwar. |
| <i>Engineering :</i> | Prof. B. H. Karakaraddi, B.E.,
B. V. B. College of Engineering, Hubli. |
| <i>Medicine :</i> | Prin. M. V. Ramanamurti, M.B.B.S., F.R.C.S.
Kasturba Medical College, Mangalore. |

Members of the Syndicate

1. Shri D. C. Pavate, M.A. (Cantab),
Vice-Chancellor (Ex-Officio Chairman).
2. Shri S. S. Bhandarkar,
Director of Education, Bombay State (Ex-Officio).
3. Prin. G. S. Paramasivayya, M.Sc., M.I.R.E.,
Lingaraj College, Belgaum.
4. Prin. V. R. Bhat, M.A., LL.M.,
R. L. Law College, Belgaum.

5. Prof. V. V. Jatti, M.Sc.,
Lingaraj College, Belgaum.
6. Shri P. M. Nadgouda, LL.B.,
Pleader, Bagalkot.
7. Shri G. S. Kulkarni, B.Sc., B.T.,
Mudi Hanuman Oni, Dharwar.
8. Prin. T. K. Patil, M.A. (London),
Vijay College, Bijapur.
9. Shri V. C. Pavate, B.Sc. (Agri),
U. B. Hill, Dharwar.
10. Shri S. I. Guttigoli, B.A., LL.B.,
Pleader, Risaldar Galli, Belgaum.
11. Prof. V. A. Mujumdar, B.A., LL.B.,
R. L. Law College, Belgaum.
12. Prin. S. W. Mensinkai, M.Sc., Ph.D. (London),
College of Agriculture, Dharwar.
13. Prin. C. C. Pattanshetti, M.A., Ph.D.,
J. G. College of Commerce, Hubli.
14. Prin. S. C. Nandimath, M.A., Ph.D. (London),
Basaveshwar College, Bagalkot.
15. Shri N. K. Dixit, B.A., LL.B.,
Pleader, Malmaddi, Dharwar.

Heads of the University Departments

Department of Kannada :	Prof. T. N. Srikantiah, M.A.
Department of Statistics :	Prof. N. U. Prabhu, M.A.
Department of Chemistry :	Prof. K. S. Nargund, M.Sc., Ph.D. (London), D.I.C., A.I.I.S.C.
Department of Physics :	Prof. N. R. Tawde, M.Sc., Ph.D. (London).
Department of Geology :	Prof. R. V. Joshi, M.Sc., Ph.D. (Poona).
Department of History :	Prof. G. S. Dikshit, M.A.
Department of Economics :	Prof. P. N. Narasinga Rao, M.A.

CONDUCT OF EXAMINATIONS

Ordinance 104 regarding the conduct of the various examinations of the University is given below.

O. 104. All examinations, admission to which is dependent on candidates, applying by the appointed time with the prescribed certificates and paying to the Registrar the prescribed fees through the Heads of the Institutions or otherwise as the Syndicate may direct, shall be held at such times, in such places and commencing on such dates as the Syndicate may appoint from time to time, as specified below:—

Examination	No. of times it is held in a year	Date of commencement	Date of receiving applications	Exam. Fee Rs.
Intermediate Arts	Once	4th Monday in March	Six weeks before the date of the commencement of examination.	30
B.A. (General and Special)	Once	Monday following the 4th Monday in March.	On or before the 20th February.	50
M.A. (by Papers)	Once	2nd Monday in April	Three months before the date of commencement of the examination	75
M.A. (by Research)	—	Thesis may be submitted at any time.	Applications along with the synopsis (in quadruplicate) three months before the submission of the thesis.	100
Diploma in Teaching Part I	Once	Thursday preceding the third Monday in March	3rd January	15
Diploma in Teaching Part II	Once	4th Monday in January	3rd January	10
B. Ed. Part I	Once	Thursday preceding the third Monday in March	15th January	15
B. Ed. Part II	Once	3rd Monday in February	15th January	15
M. Ed. (by Papers)	Once	2nd Monday in April	Three months before the date of commencement of the examination	75
M. Ed. (by Research)	—	Thesis may be submitted at any time.	Applications along with the synopsis (in quadruplicate) 3 months before the submission of the thesis.	75
Intermediate Commerce	Once	4th Monday in March	One Month before the date of commencement of the examination	30

Examination	No. of times it is held in a year	Date of commencement	Date of receiving applications	Exam. Fee Rs.
B. Com.	Twice	4th Monday in March and Monday in October	One month before the date of commencement of the examination	50
M. Com.	Once	2nd Monday in April	23rd Dec., preceding the date of commencement of the examination	100
Intermediate Science	Once	4th Monday in March	Six weeks before the date of commencement of the examination	40
B. Sc. (Prin)	Once	Monday following the 4th Monday in March	On or before the 20th February	* 50
B. Sc. (Sub)	Twice	Monday following the 4th Monday in March and 1st Monday in Oct.	20th Feb., and 1st September	† 35
M. Sc. (Maths) by Papers	Once	2nd Monday in April	Three months before the date of commencement of the examination	75
M. Sc. (by Papers) in subjects other than Mathematics, Statistics and Agriculture.	Once	1st Monday in May	Three months before the date of commencement of the examination	100
M. Sc. (by Research)	—	Thesis may be submitted at any time	Application to be sent along with synopsis (in quadruplicate) three months before the submission of the thesis	100
Ph. D. (French & German Translation Test)	Twice	3rd Monday in April and Monday in October	Three weeks before the date of commencement of the examination	25

* If the B.Sc. Principal and Subsidiary Examinations are taken together, the fee shall be Rs. 70/-

† The detailed programme of the B.Sc. Principal and Subsidiary Examinations (both written and practical) shall be framed so as to provide for a candidate taking the Principal and Subsidiary Examinations together the same Examination seasons.

Examination	No. of times it is held in a year	Date of commencement	Date of receiving applications	Exam. Fee Rs.
Law Preliminary	Twice	2nd Monday in April and Monday in October	One month before the date of commencement of the exami- nation	35
First LL.B.	Twice	2nd Monday in April and Monday in October	One month before the date of commencement of the exami- nation	40
Second LL.B.	Twice	2nd Monday in April and Monday in October	One month before the date of commencement of the exami- nation	60
LL.M.	Once	1st Monday in May	Two months before the date of commencement of the exami- nation	150
F. E.	Once	2nd Monday following 10th March	One month before the date of commencement of the exami- nation	40
S.E. (Civil)	Once	Immediately after F.E.	One month before the date of commencement of the exami- nation	40
B.E. (Civil)	Twice	After the S.E. (Civil) examina- tion and 2nd Monday following 10th October	One month before the date of commencement of the exami- nation	60 for each Part
F.Sc. (Agri)	Once	1st Monday in March	3rd February	40
S.Sc. (Agri)	Once	Immediately after the B.Sc. (Agri.) Examination	3rd February	40

Examination	No. of times it is held in a year	Date of commencement	Date of receiving applications	Exam. Fee Rs.
I. Sc. (Agri) First Year	Once	1st Monday in March	One month before the date of commencement of the examination	40
I. Sc. (Agri)	Once	Immediately after the B. Sc. (Agri) Examination	One month before the date of commencement of the examination	40
B. Sc. (Agri)	Once	1st Monday in March	3rd February	60
M. Sc. (Agri) by Papers	Once	1st Monday in March	Two months before the date of commencement of the examination	100
M. Sc. (Agri) by Papers and by Research	Twice	1st Monday in March and 1st Monday in October	Two months before the date of commencement of the examination	100
First M.B.B.S.	Twice	Last week of April & 2nd week of December	One month before the date of commencement of the examination	40
Second M.B.B.S.	Twice	—do—	Six weeks before the date of commencement of the examination	50
Third M.B.B.S.	Twice	—do—	Six weeks before the date of commencement of the examination	75

ADMISSION TO THE UNIVERSITY, COURSES OF STUDY, EXAMINATIONS AND DEGREES.

Admission to the First Year Courses of study leading to the Bachelor's Degree in Arts, Science, Commerce or Agriculture is governed by Statute 176 which is given below :

[N.B. : The number suffixed to the subjects referred to in the Statute, are from the S.S.C.E. Green Book, 2nd Edition (revised February, 1951) containing a list of subjects and courses of study for the Examination of 1952.]

St. 176 : For admission to the courses of First Year A, B, C Groups, and the First Year Commerce and First Year Agriculture Courses, an applicant must have passed the Secondary School Certificate Examination conducted by the Secondary School Certificate Examination Board of the Bombay State in the subjects mentioned under the following Eligibility Groups: A, B, C, D and E for admission to the respective courses of studies mentioned against each, with at least 35% of the marks in each head, the remark 'condoned' made by the S.S.C.E. Board in the Statement of marks against a subject being treated as equivalent to passing in that subject with 35% of the total marks, provided that a student who having offered eight or more subjects at the S.S.C. Examination passes the S.S.C. Examination but fails to secure 35 per cent of marks in one of the heads prescribed under the following eligibility groups A, B, C, D and E, may be given provisional admission to the respective courses, his admission to such a course being confirmed on his passing in that subject in the next succeeding (October) S.S.C. Examination.

ELIGIBILITY Group 'A'—For admission to the First Year 'A' Course.

I. General English (without texts) (1) 100 marks

II. Any one of the following Modern Indian Languages :— 100 marks

Kannada (5), Telugu (7), Marathi (3), Gujarathi (4), Urdu (8),
Sindhi (9), Tamil (6), Bengali (10).

or,

Additional English (with texts) (11)

or,

Additional Hindi (with texts) (12)

III. Any one of the following Classical or Modern European Languages :— 100 marks

Sanskrit (16), Pali (17), Ardhamagadhi (18), Arabic (19), Persian

(20), Avesta-Pahlavi (21), Latin (22), Hebrew (23), Greek (24), French (25), German (26), Spanish (27), Italian (28), Portuguese (29).

IV. Any one of the following Natural Science Groups:— 100 marks

General Science (34), Physics and Chemistry (35), Botany and Zoology (36), Physiology and Hygiene (37).

V. Any one of the following mathematics subjects:— 100 marks

Algebra (32), Geometry (33).

VI. Any one of the following Social Studies:— 100 marks

History (13), Indian Administration & Civics (14), Geography (15).

VII. Any one of the following subjects:— 100 marks

Arithmetic (31), Algebra (32), Geometry (33), History (13), Indian Administration & Civics (14), Geography (15).

or

Any one of the following crafts:—

House Craft (44), Radio Service (58), Hand Spinning and Hand Weaving (59), Tailoring & Cutting (61), Tailoring, Embroidery & Fancy Work (62), Typography (63).

N.B.:—Provided that—

(a) no subject chosen under any one of these 7 heads should be repeated under any other head;

(b) combined passing in any two of the subjects—Algebra, Geometry and Arithmetic—is permissible

ELIGIBILITY Group 'B'—For admission to the First Year 'B' Course, or for First Year Agriculture course.

I. General English (without texts) (1) 100 marks

II. Any one of the following Modern Indian Languages:— 100 marks

Kannada (5), Marathi (3), Urdu (8), Tamil (6), Telugu (7), Gujarati (4), Sindhi (9), Bengali (10).

or,

Additional English (with texts) (11)

or,

Additional Hindi (with texts) (12)

III. Algebra (32) 100 marks

IV. Geometry (33) 100 marks

V. & VI. Physics & Chemistry (35) 100 marks

VI. & VII. Agriculture Science (2 papers) (39 & 40) 200 marks

or,

VI. Any one of the following courses in Social Studies:— 100 marks

History (13), Indian Administration & Civics (14), Geography (15),
&

VII. Any one of the following subjects:— 100 marks

(a) Sanskrit (16), Ardhamagadhi (18), Persian (20), German (26),
Arithmetic (31), Geography (15), French (25), Portuguese (29).

(b) House Craft (44), Radio Service (58), Hand Spinning and
Hand Weaving (59), Tailoring and Cutting (61), Tailoring, Embroidery
and Fancy Work (62), Typography (63).

Provided that—

(a) no subject chosen under any one of these 7 heads should be
repeated under any other head;

(b) combined passing in any two of the subjects:— Algebra,
Geometry and Arithmetic—is permissible.

ELIGIBILITY GROUP 'C'—For admission to the First Year
Commerce Course.

I. General English (without texts) (1) 100 marks

II. Any one of the following Modern Indian Languages:— 100 marks

Kannada (5), Marathi (3), Urdu (8) Tamil (6), Telugu (7),
Gujarati (4), Sindhi (9), Bengali (10).

or,

Additional English (with texts) (11)

or,

Additional Hindi (with texts) (12)

III. Geography (15) 100 marks

IV. Any one of the following Natural Science Groups:— 100 marks

General Science (34), Physics & Chemistry (35), Botany and
Zoology (36), Physiology and Hygiene (37).

V. Arithmetic (31). 100 marks

VI. & VII. Elements of Commerce (39), 2 papers 200 marks
carrying 200 marks, in the case of Commercial High
Schools only.

or

VI. Any one of the following Subjects:— 100 marks

Indian Administration and Civics (14)

Book-Keeping and Accounts (45)

&

VII. Any one of the following subjects:— 100 marks

History (13), Algebra (32), Geometry (33), Shorthand and Type-
writing [46 (i) and (ii)], Book-Keeping and Accounts (45), Sanskrit

(16), Ardhamagadhi (18), Persian (20), French (25), German (26), Portuguese (29), House Craft (44), Radio Service (58), Hand Spinning and Hand Weaving (59), Tailoring and Cutting (61), Tailoring, Embroidery and Fancy Work (62), Typography (63).

N.B.— Provided that—

- (a) no subject chosen under any one of these 7 heads should be repeated under any other head;
- (b) combined passing in any two of the subjects—Algebra, Geometry and Arithmetic—is permissible.

ELIGIBILITY GROUP 'D'—Common course for admission to the First Year A, B, C, First Year Commerce and First Year Agriculture courses.

I. General English (without texts) (1) 100 marks

II. Any one of the following Modern Indian Languages :— 100 marks

Kannada (5), Marathi (3), Urdu (8), Tamil (6), Telugu (7), Gujarati (4), Sindhi (9), Bengali (10),

or,

Additional English (with texts) (11)

or,

Additional Hindi (with texts) (12)

III. Any one of the following Classical or Modern European

Languages : 100 marks

Sanskrit (16), Pali (17), Ardhamagadhi (18), Arabic (19), Persian (20), Avesta-Pahlavi (21), Latin (22), Hebrew (23), Greek (24), French (25), German (26), Spanish (27), Italian (28), Portuguese (29).

IV. Any one of the following Natural Science Groups :— 100 marks

General Science (34), Physics & Chemistry (35), Botany & Zoology (36), Physiology & Hygiene (37).

V. Algebra (32)

VI. Geometry (33) 100 marks

VII. Any one of the following Social Studies— 100 marks

History (13), Indian Administration & Civics (14), Geography (15)

N.B.— Provided that—

- (a) No subject chosen under any one of these 7 heads should be repeated under any other head.
- (b) Combined passing in any two of the subjects—Algebra, Geometry & Arithmetic is permissible.

ELIGIBILITY Group 'E'—Common Course for admission to the First Year A, B, C, First Year Commerce and First Year Agriculture course.

- I. General English (without Texts) 100 marks
- II. (a) (i) Any one of the following Modern Indian Languages :— 200 marks
Kannada, Marathi, Urdu, Hindi, Tamil, Telugu, Bengali,
or
(ii) An Additional paper in English,
and
(b) (i) Any one of the following Ancient Languages :—
Sanskrit, Pali, Ardhamagadhi, Persian, Arabic, Greek, Latin.
or
(ii) Any one of the following Modern European Languages :—
French, German, Portuguese.
- III. History and Geography. 100 marks
- IV. Mathematics, consisting of Algebra and Geometry. 200 marks
- V. i. General Science, or 100 marks
ii. Physics and Chemistry, or
iii. Botany and Zoology, or
iv. Domestic Science, or
v. Physiology and Hygiene.

Provided that :—

- (a) A student passing the S.S.C. Examination conducted by the S.S.C. Examination Board in the subjects prescribed from time to time [1] for Agricultural or Technical High Schools or [2] for Commercial Schools shall also be eligible for being admitted as a student of the University to the First Year 'B' Group Course First Year Agriculture Course or to the First Year Course in Commerce, as the case may be.
- (b) And further provided that a student passing the S.S.C. Examination conducted by the S.S.C. Examination Board in the subjects specified in proviso (a) above shall also be eligible for being admitted as a student of the University to the First Year 'A' Group Course, provided such a student passes, in addition at the said examination, an Examination in any one of the Ancient Languages or Modern European Languages with 35 percent of the total marks for it.

or,

- II. The School Leaving Certificate Examination held by the Government of Bombay, under the following conditions :—
- (a) The holder of the School Leaving Certificate, who has completed and passed in the courses laid down for Agricultural Schools or for Technical Schools, is deemed eligible for admission to the First Year 'B' group course.

- (b) The holder of the School Leaving Certificate, who has completed and passed in the courses laid down for Commercial Schools, is deemed eligible for admission to the First Year Commerce course.
- (c) The holder of the School Leaving Certificate, who has attended a vocation school and passed the examination for the course concerned, and who seeks admission to the First Year 'A' group course is deemed eligible for admission thereto, provided he passes in a test as directed by the Vice-Chancellor in a classical language or a Modern European Language of the S. S. C. E. standard,

or

- III. The Matriculation or Entrance Examination conducted or controlled by any Statutory Indian University.
- IV. Any other examination recognized by the University as equivalent to any of the examinations named above and which satisfies such other conditions as may be laid down in granting such equivalence.

DEGREE OF THE BACHELOR OF ARTS (B.A.)

General :

O. 137. Candidates for the degree of Bachelor of Arts must have passed the Secondary School Certificate Examination with the required eligibility group for the Arts course or any other examination recognized as equivalent and will be required to pass two subsequent examinations, the first to be called the Intermediate Examination in Arts and the second examination for the Degree of Bachelor of Arts.

(i) First Year Examination in Arts :

O. 138: During the First Year there shall be no University Examination for a candidate proceeding to a degree in Arts. A candidate for being permitted at the end of the First Year to enter on a course for the Intermediate Examination in Arts shall have to produce a certificate from the Principal of a College showing (i) that he has kept two terms at a college or colleges affiliated to the University for the first two terms, (ii) that he has satisfactorily gone through the course of Physical training prescribed by the Syndicate from time to time, unless exempted on the ground that he is medically unfit to undergo such exercise or that he is a member of the National Cadet Corps Senior Division. In order to go through a course of physical training satisfactorily, the student shall have to attend the physical training class of the college for at least three-fourths of the number of periods.

Where a candidate has kept two terms at a college or colleges affiliated to the University but has not been certified to have satisfactorily carried out the work appointed by the University for the first two terms in Arts and has joined another college, the Principal of the new college

may issue to him the certificate contemplated by the Ordinance provided that the candidate has kept at least one term in his college and that he has satisfactorily carried out the work appointed for the first two terms to the satisfaction of the Principal.

O. 138-A: Students who have taken up either Science or Commerce course for the First Year College examination of an affiliated college will be permitted by the Principal of the college to change over to the Arts course if they are eligible for admission to the new course any time during the year, provided that they are able to keep the minimum attendance of 65 days in the First Year Class during the second term in the new changed group.

O. 138-B: Students of the First Year Commerce class are allowed with the permission of the Principal to change over to the First Year Arts course provided they are eligible for admission to the new course at any time before the end of the first term and that their attendance in the F.Y. Commerce class shall count towards the minimum required for the first term in the First Year Arts course.

The following is the syllabus prescribed for the First Year Arts course :

R. 2: Candidates will be examined in the following subjects:

Compulsory Subjects:

1. English Prose & Poetry (Texts) One Paper carrying 100 marks and of three hours' duration.
2. Composition in English with Texts: One Paper carrying 100 marks and of three hours' duration.
3. A Modern Indian Language with texts or an Additional Paper in English with Texts: One Paper carrying 100 marks and of three hours' duration.
4. A Classical Language or a Modern European Language other than English with Texts: One Paper carrying 100 marks and of three hours' duration.
5. Hindi: One Paper carrying 50 marks and of two hours' duration.

Optional Subjects:

The following shall be the optional subjects out of which the candidates will be required to take any such subjects from among them which carry 300 marks in the aggregate:

6. Indian Administration: One Paper carrying 100 marks and of three hours' duration.
7. Civics: One Paper carrying 100 marks and of three hours' duration.

8. Outlines of Ancient Indian History and Culture: One Paper carrying 100 marks and of three hours' duration.
9. Geography: One Paper carrying 100 marks and of three hours' duration.
10. Mathematics: Two Papers carrying 100 marks each and each of three hours' duration:

Intermediate Examination in Arts:

O. 139: No candidate will be admitted to this examination unless after obtaining a certificate from the Principal of an Arts College showing that he has satisfactorily carried out the work appointed by the University for the first two terms in the First Year Arts course (a) he shall have kept two terms at a college or Institution recognized in Arts and unless he produces satisfactory testimonials in the prescribed form, (b) that he has satisfactorily gone through the course of physical training prescribed by the Syndicate from time to time, unless exempted on the ground that he is medically unfit to undergo such exercise or that he is a member of the National Cadet Corps—Senior Division.

In order to go through the course of physical training satisfactorily, the student shall have attended the physical training class of his college for at least three-fourths of the number of periods.

O. 139-A: Notwithstanding anything contained in the Ordinances relating to the Intermediate Arts and the Intermediate Examination in Science a candidate who has been permitted by his Principal to enter on a course for the Intermediate Examination in Science will be permitted at his option to enter on a course for the Intermediate Examination in Arts, provided that he satisfies the Principal at an examination to be held before the 20th July, in a Classical or a Modern European language. Such a candidate shall *at his risk* be permitted provisionally to attend the courses of instruction for the Intermediate Examination in Arts from 20th June.

O. 139-B: Notwithstanding anything contained in O. 139 a candidate who has been awarded the Diploma in Teaching by this University shall be permitted to appear for the Intermediate Examination in Arts after keeping two terms only at a college or institution recognized in Arts on his producing satisfactory testimonials in the prescribed form.

O. 139-C: Notwithstanding anything contained in the Ordinances relating to the Intermediate examination in Arts, a candidate who has been certified by the Principal of an Affiliated college in Commerce to have completed the course for the First Year Examination in Commerce will be permitted at his option to enter on a course for the Intermediate Examination in Arts provided that he satisfies the Principal at an examination to be held before the 20th July in a Classical language or a Modern European Language. Such a candidate shall at

his risk be permitted *provisinoally* to attend the course of instruction for the Intermediate Examination in Arts from 20th June.

The following are the compulsory and optional subjects which a student has to offer at the Intermediate Arts course :

1. English Prose and Poetry with texts: One Paper carrying 100 marks and of three hours' duration.
2. Composition in English with Texts: One Paper carrying 100 marks and of three hours' duration.
3. A Modern Indian Language with texts or Additional Paper in English with Texts: One Paper carrying 100 marks and of three hours' duration.
4. A Classical Language or a Modern European Language other than English with texts: One Paper carrying 100 marks and of three hours' duration.
5. Hindi: Details will be communicated later.
6. & 7.: Mathematics: Two Papers each carrying 100 marks and of three hours' duration each :

OR

Logic: Two Papers carrying 100 marks each and each of three hours' duration.

Optional Subjects :

Any two of the following subjects :

8. World History: One Paper carrying 100 marks and of three hours' duration.
9. Elements of Economics: One Paper carrying 100 marks and of three hours' duration.
10. Elementary Psychology: One Paper carrying 100 marks and of three hours' duration.
11. Geography: One Paper carrying 100 marks and of three hours' duration.

Standard for passing the Examination :

The following are the rules governing the standard of passing the Examination :

R. 3-B: To pass the Examination the Candidate must obtain 30 per cent of the full marks in each head. Those of the successful candidates who obtain 60 per cent of the total marks obtainable will be placed in the first class and those obtaining 45 per cent, in the second class.

Examination for the Degree of Bachelor of Arts:

O. 140: No candidate will be admitted to this Examination unless after passing the Intermediate Examination in Arts he shall

have completed the minimum attendance at courses of instruction in the subjects offered by him during four terms in one or more colleges, each of which is recognized for the courses offered and unless he produces satisfactory testimonials in the prescribed form.

O. 140-A : A candidate passing the B.Com. Examination under the new rules shall be permitted to appear for the B.A. (Special) Examination with Economics Honours without keeping fresh terms subject to the following conditions :

(i) He will be required to pass the Intermediate Examination in Arts in a Classical Language or a Modern European Language other than English either before or in the same examination season in which he appears for the B.A. Examination.

(ii) He will be required to appear and pass in the Paper in Compulsory English on Shakespeare only at the B.A. Examination.

The schemes for the B.A. (General) and B.A. (Special) Courses are as under :

I. B.A. (General) :

I. English : (Compulsory) : Two Papers carrying 100 marks each and of three hours' duration. One of the Papers shall include composition.

II. Four other (Voluntary) subjects (with two papers carrying 100 marks each and each of three hours' duration) to be selected from the following groups 'A' to 'G' provided that the candidate chooses his subjects from at least three Groups and provided further that the candidates who takes 'D' (iv) shall take 'D' (i) and that the candidate who takes 'F' shall take 'F' (i) but not 'D' (iv).

N.B. : Identical subjects occurring under two separate Groups shall not be offered by candidates as two separate subjects :

(A) Languages :

(a) *Modern European* : English, French, German, Portuguese, Russian. Two papers each of three hours' duration and each carrying 100 marks based on texts of Modern Literature, Prose, Poetry and Drama in each language.

(b) *Modern Indian* : Kannada, Telugu, Tamil, Malayalam, Marathi, Hindi and Urdu. Two Papers of 100 marks each and three hours' duration as under :

Paper—I : Poetry.

Paper—II : Drama and Prose : Modern Texts.

(c) *Classical : Oriental and European* : Sanskrit, Pali Prakrit, (Ardhamagadhi), Arabic, Persian, Latin and Greek. Two Papers of 100 marks each and each of three hours' duration.

(B) Philosophy :

(i) History of Philosophy, (ii) Psychology, (iii) Moral and Social Philosophy and (iv) Education.

(C) History :

(i) Ancient Europe, (ii) Modern Europe, (iii) Ancient and Mediaeval India, (iv) Modern India, (v) Persian History, (vi) Constitutional History, (vii) Political Science, (viii) Ancient Indian Culture, and (ix) Islamic Culture.

(D) Economics :

(i) Principles of Economics, (ii) Economic History, (iii) Political Science, (iv) Statistical Methods and (v) Economic Development of India.

(E) Sociology :

(i) Introductory Sociology and (ii) Social Anthropology.

(F) Mathematics and Statistics :

(i) Pure Mathematics, (ii) Applied Mathematics, (iii) Algebra and Geometry, (iv) Calculus and Differential Equations and (v) Statistics.

N.B. : Subjects (iii) and (iv) must be taken together.

II. B.A. (SPECIAL)

1. *English* (Compulsory) : Two Papers each carrying 100 marks and each of three hours' duration : One of the Papers shall include Composition.

II. *Four other (Voluntary)* : Subjects (with Two Papers in each carrying 100 marks and each of three hours' duration) so that at least three subjects listed in *italic* numerals under any one language from among the languages under group (A) sub-groups (a) to (d), are selected.

Provided further that a language offered in addition to the six papers in a language is not from the same sub-group from which six papers are selected. The two papers to be answered in this additional language will be the two papers as laid down for the B.A. (General) course in the language concerned.

The groups and sub-groups and the subjects therein are as under :

N.B. : Identical subjects occurring under two separate groups shall not be offered by candidates as two separate subjects :

(A) English :

(i) Papers I and II : The same as for the B.A. (General) examination.

(ii) Two literary forms: Chaucer (Prologue and a Canterbury Tale) and History of the English Language.

(iii) Criticism and Prosody: History of English Literature.

(b) *Modern European*: French or German or Portuguese and Russian.

(i) Papers I and II: The same as for the B.A. (General) course.

(ii) Translation: Essay and Grammar: Two Papers.

(iii) History of Literature from 1500 A.D. to 1800 A.D. with a few outstanding illustrative works—Two Papers.

(c) *Modern Indian*: Kannada or Telugu or Tamil or Malayalam or Hindi or Marathi or Urdu.

(i) Papers I and II: The same as for the B.A. (General) course.

(ii) Translation: Essay and Grammar: Two Papers.

(iii) History of Literature upto 1800 A.D. with a few outstanding illustrative works: Two Papers.

(d) *Classical (Oriental and European)*: Sanskrit or Pali or Prakrit (Ardhamagadhi) or Persian or Arabic or Greek or Latin.

(i) Papers I and II: The same as for the B.A. (General) course.

(ii) Translation: Grammar and History of Literature—Two Papers.

(iii) Old Literature according to the basic requirements of each language—Two Papers.

(e) *Ancient Indian Culture or Islamic Culture*: Two Papers.

(B) *Philosophy*:

(i) History of Philosophy, (ii) Psychology, (iii) Moral and Social Philosophy, (iv) Education, (v) Logic and Metaphysics, (vi) Psychology and Philosophy of Religion and (vii) Advanced Psychology.

N.B.: Candidates taking 'Special' course in Philosophy must take at least one of the subjects (v), (vi) and (vii).
Candidates who take (vii) shall take (ii).

(C) *History*:

(i) Ancient Europe, (ii) Modern Europe, (iii) Ancient and Mediaeval India, (iv) Modern India, (v) Persian History, (vi) Constitutional History, (vii) Political Science, (viii) Ancient Indian Culture, (ix) Islamic Culture, (x) Physical Anthropology, (xi) Social Anthropology.

(D) *Economics*:

(i) Principles of Economics, (ii) Economic History, (iii) Political Science, (iv) Statistical Methods, (v) Economic Development of India, (vi) History of Economic Thought.

N.B.: Every candidate offering Economics (Special) shall take (i) and (v).

(E) *Sociology:*

(i) Introductory Sociology, (ii) Social Anthropology, (iii) Social Organisation and Social Amelioration.

(F) *Mathematics and Statistics:*

(i) Algebra and Geometry, (ii) Calculus and Differential Equations, (iii) Mechanics, (iv) Astronomy, Electricity and Magnetism and (v) Statistics.

N.B.: Subjects (i), (ii), (iii) are compulsory. No candidate can take (iv) Statistical Methods in Group 'D' Economics and (v) Statistics under Group 'F' Mathematics at the same time.

STANDARD OF PASSING :

R. 4-D: To pass the B.A. (General) Examination a candidate shall be required to obtain 30 per cent of the total in the Compulsory English, a minimum of 25 per cent in each of four optional subjects (comprising of two papers of 100 marks each) and 30 per cent in the aggregate of the four optional papers. Those obtaining 45 per cent or more in the aggregate of the papers in subjects other than the Compulsory English shall be declared to have passed the B.A. (General) Examination in the Second Class. Those obtaining 60 per cent or more in the aggregate of the papers in subjects other than Compulsory English, shall be declared to have passed the B.A. (General) Examination in the First Class.

R. 4-F: To pass the B.A. (Special) Examination a candidate shall be required to obtain at least 30 per cent of the total marks in the Compulsory English and 35 per cent of the total marks in the aggregate of the remaining papers.

Those who obtain 45 per cent or more in the aggregate of the Special Papers shall be declared to have passed the B.A. (Special) Examination in the Second Class and those who obtain 60 per cent or more in the aggregate of the Special Papers, shall be declared to have passed in the First Class.

**EXAMINATION FOR THE DEGREE OF
MASTER OF ARTS.**

O. 141: Any person who has taken the Degree of Bachelor of Arts of this University or a Degree of another University recognised as equivalent thereto may, after he has worked under the guidance of a University Teacher for at least two years, subsequent to his passing the examination for the degree of Bachelor of Arts, be admitted to

the examination for the Degree of Master of Arts in any one of the branches mentioned in Regulation 5. The Examination may be taken (i) by Papers or (ii) Partly by Papers and partly by thesis, or (iii) by thesis alone as permitted by the relevant Regulations.

R. 5 : The Examination will comprise the following branches :

(i) Languages, (ii) History, Economics and Sociology, (iii) Philosophy, (iv) Mathematics and Statistics, (v) Ancient Indian Culture and (vi) Islamic Culture.

The scheme and combination of the various subjects, is as under :

(i) *Languages*: 8 Papers.

R. 5-A : Subject to the proviso hereinafter contained and consistent with the options given below, candidates must offer any two languages one of them being taken as a Principal language and the other as a subordinate one. There will be six papers in the Principal language and two in the Subordinate. A candidate taking English as a Principal language shall have the option of taking two additional papers in English in lieu of two papers in a subordinate language. Each paper in these languages will carry 100 marks.

(i) The grouping of languages will be as follows :

Group I :

English, French, German and Portuguese.

Group II :

- (a) Latin, Greek,
- (b) Latin, Greek or Sanskrit,
- (c) Sanskrit, Pali,
- (d) Sanskrit, Prakrit, (Ardhamagadhi),
- (e) Pali, Prakrit, (Ardhamagadhi),
- (f) Arabic, Persian,
- (g) Persian, Sanskrit.

Group III :

(i) Kannada, Telugu, Tamil, Malayalam, Hindi, Marathi and Urdu.

(ii) The options will be allowed as follows :

Option (A) — Any pair of Group I.

Option (B) — Any one of Group I with any other language.

Option (C) — Any Sub-group of II.

Option (D) — Any one of Group III with a related language in Group II.

For purposes of option 'D', the following combinations are considered as related.

- (i) Kannada or Marathi or Telugu or Tamil or Malayalam or Hindi or Prakrit or Pali with Sanskrit.

(ii) Urdu with Persian or Arabic.

(iii) Hindi with Persian or Arabic.

(ii) *History, Economics and Sociology :*

R. 5-B: Candidates may at their option offer a thesis in a subject dealt with in any of the following six groups or submit to a written examination of eight papers in any one of two of the groups A, B, C and D or in the Groups 'C' (Economics) and 'E' (Advanced Economics) or in Group 'D' (Sociology) and 'F' (Advanced Sociology).

Group—A : History and Politics :

1. English Constitutional History.
2. A special period of Indian History to be chosen from the following or a special period of Ancient Persian History :
 - (a) Ancient India, (b) Mohamedan India, (c) The Maratha Power, (d) The British Period—1819 A.D. to 1858 A.D.
3. Theory of Politics.
4. Comparative Politics.

Group—B : History :

1. Mediaeval History.
2. Modern History.
3. British Colonial History.
4. Historical Essay.

Group—C : Economics :

Paper I : Development of Economic Theory. A comprehensive and critical study of any one of the following Schools of Economic Thought to be decided by rotation.

- (i) Classical School from Smith to Mill.
- (ii) Marx and Marxism.
- (iii) Neo-classical thought between 1870 A.D. and 1920 A.D.
- (iv) Keynesian Economics.

Paper II : Theory of Value.

Paper III : Money, Banking and International Trade.

Paper IV : Public Economics.

Group—D : Sociology :

Paper I : General Sociology.

Paper II : Social Biology.

Paper III : Social Psychology.

Paper IV : Indian Sociology.

Group—E : Advanced Economics.

N.B. : Candidates are required to take any four out of the twelve topics given below :

- (1) Agricultural Economics, (2) Industrial Fluctuations and Business Cycles, (3) Transport Economics, (4) Population, (5) Structure of Industries and Industrial Finance, (6) Labour Problems, (7) Theory and Practice of Public Finance, (8) Foreign Exchange and International Trade, (9) Theory of Money, (10) Banks and Banking Systems, (11) Economic Systems, (12) Economics of Consumption and Social Welfare.

Group—F : Advanced Sociology :

Paper I : Civilisation : Egypt Mesopotamia, Europe, China. Civilisation and Culture.

Paper II : Social Institutions (Advanced study) : (i) Marriage, (ii) Family, (iii) Property and (iv) Rank.

Paper III : Social Problems—Education and Crime, (with special reference to India). Hindu and Muslim Social thought.

Paper IV : Archaeology and Ethnology of India.

R. 5-C : (iii) Philosophy (8 papers).

N.B. : Candidates may at their option submit to a written examination of eight papers as given below or they may offer a thesis connected with one or more of the subjects prescribed for the Papers in lieu of the whole of the written examination.

A—Compulsory Papers :

1. History of Ancient Philosophy (One Paper).
2. History of Modern Philosophy (One Paper).
3. Moral Philosophy (One Paper).
4. Psychology (One Paper).

B—Optional Papers :**(a) Philosophy :**

1. Natural Theology or the History of Indian Philosophy or the History of Islamic Philosophy (One Paper).

2-3 : Any two of the following Philosophies (Two Papers).

- (i) The Philosophy of Plato, (ii) The Philosophy of Aristotle, (iii) The Philosophy of Kant, (iv) Sankhya, (v) Buddhism, (vi) The Advaita of Shankaracharya, (vii) Vishishtadvaita of Ramanujacharya, (viii) Jainism.

4. Essay (One Paper).

OR

(b) Sociology (Four Papers).

N.B. The Papers and syllabus in Sociology under the Philosophy branch will be the same as those of Group 'D' Under History, Economics & Sociology branches.

(iv) *Mathematics and Statistics* :

R. 5-D: Candidates must select one of the following Groups :

Group 'A' : (Pure Mathematics)

Paper I : Algebra and Theory of Equations.

Paper II : Solid Geometry.

Paper III : Pure Geometry, Plane and Spherical Trigonometry.

Paper IV : Plane Analytical Geometry and Higher Plane Curve.

Group. 'B' : (Applied Mathematics)

Paper I : Differential and Integral Calculus, Solid Geometry.

Paper II : Differential Equations, Fourier Series and Spherical Harmonics.

Paper III : Statics, Attractions and Theory of Potential Elementary Electricity.

Paper IV : Dynamics of a Particle, Rigid Dynamics.

Paper V : Hydrostatics, Hydrodynamics and Sound.

Paper VI : Electricity and Magnetism, Relativity.

Paper VII and VIII : Two Papers in any one of the following groups :

- (1) Electricity, (2) Higher Dynamics, (3) Hydrodynamics and Theory of Tides, (4) Optics and Sound, (5) Celestial, (6) Mechanics, (7) Electricity and Magnetism and Relativity, (8) Probability and Statistics.

M.A. EXAMINATION BY RESEARCH IN HISTORY, ECONOMICS, SOCIOLOGY AND PHILOSOPHY

O. 141-B. A Thesis can be submitted under the following Regulations in History, Economics, Sociology and Philosophy only.

O. 141-C. Any person being a Bachelor of Arts of this University or of a University recognised by this University shall be eligible for the Degree of Master of Arts (By Research).

O. 141-D. Every candidate must, unless specially exempted by the Syndicate as provided in O. 136-A, work under a University Professor, a whole-time University Teacher or a University Teacher. He shall register as a post-graduate research student at the office of the University Registrar or in the Institution permitted to enrol students within one month of his admission as a research student.

R. 5-K.: The Thesis shall be either (i) a critical analysis of the existing data or (ii) a record of investigation or (iii) a combination of these.

STANDARD OF PASSING.

R. 5-G.: (A) To pass the M.A. Examination in languages, a candidate must obtain 25 per cent of the marks in each of the eight papers, 30 per cent in the total of the two papers in the subordinate language and 40 per cent in the total of the six papers in the Principal language. A candidate offering a thesis in lieu of the four Honours in the Principal language must obtain in order to pass the examination, 25 per cent of the full marks in each of the four papers in which he appears, 30 per cent in the total of the two papers in the subordinate language $37\frac{1}{2}$ per cent in the Thesis and 40 per cent in the Thesis and two pass papers in the Principal language taken and put together.

(B) To pass the examination in (i) History, Economics, Sociology and Philosophy, (ii) Ancient Indian Culture and (iii) Islamic Culture, the candidate must obtain (a) one-fourth of the full marks in each paper and (b) three-eighths of the total marks obtainable.

(C) To pass the examination in Mathematics (A and B groups) the candidate must obtain either (i) one-fourth of the full marks in each paper and (ii) three-eighths of the total marks obtainable, or 40 per cent of the total marks obtainable.

To pass the examination in Mathematics Group 'C' the candidate must obtain either (i) one-fourth of the full marks in each paper and $37\frac{1}{2}$ per cent of the full marks in the two practicals and the laboratory note books combined and (ii) three-eighths of the total marks obtainable, or (1) 40 per cent of the full marks obtainable and (2) $37\frac{1}{2}$ per cent of the full marks in the two practicals and the laboratory note books combined.

(D) Those of the successful candidates who obtain 65 per cent of the total marks will be placed in the first class and those obtaining 50 per cent in the second class. Further in the languages group, even if a candidate does not satisfy the above condition, but gets 75 per cent in the total of the papers in the Principal language only, he will be placed in the first class and if he obtains 60 per cent in the total of the papers in the Principal language only, he will be placed in the second class.

EXAMINATIONS IN EDUCATION

DIPLOMA IN TEACHING. (T.D.)

Admission :

O. 142: No candidate shall be admitted to the examination for the Diploma in Teaching unless he has passed—

- (a) The secondary school certificate examination conducted by the S.S.C. Examination Board, Poona, or an examination recognised as equivalent thereto, and subsequently has obtained teaching

experience for a period of not less than three years in a school recognised by this University.

OR

- (b) the first Year Certificate examination in Arts, Science or Commerce of this University or of any other Statutory University in the Bombay State or the Intermediate Examination in Arts, Science or Commerce of any other University or examining Body recognised by this University.

Subjects of the Examination :

PART I.

Paper I : Elementary Principles of Education and Psychology.

Paper II : Special Methods.

Paper III : General Methods, School Hygiene, and School Administration.

Paper IV : An outline of twentieth century developments in Indian education and educational administration in the Bombay State.

(Each of the papers mentioned above carries 100 marks and is of three hours' duration.)

PART II

Practical Examination : Two lessons, carrying 50 marks each.

Standard of passing :

R. 6-E: A candidate obtaining 40 per cent or more of the total marks separately in Part I and in Part II shall be declared to have passed the examination.

A candidate obtaining 65 per cent or more in the aggregate and not less than 50 per cent in Part II shall be declared to have passed with distinction.

A candidate who has passed in either of the Parts of the examination may be exempted, at his option from appearing therein at a subsequent attempt, but a candidate availing himself of such exemption shall not be eligible for distinction.

EXAMINATION FOR THE DEGREE OF BACHELOR OF EDUCATION. (B.ED.)

Admission :

O. 143 : A candidate for the Degree of Bachelor of Education must be a graduate of the Karnatak University or of a University recognised by the Karnatak University in any Faculty and in addition, must after graduation have—

- (i) kept two terms (the first and the second) of lectures on the theory and practice of education in a Training College affi-

liated to the University for the purpose of the B.Ed. Degree; and

- (ii) completed a course of practical work, extending over two school terms to the satisfaction of the Head of the institution in which the candidate is studying, consisting of—
 - (a) attendance at demonstration and discussion lessons,
 - (b) observation of teaching as directed,
 - (c) teaching practice of not less than 30 lessons distributed over different standards I to VI of a recognised school or a school selected by the Principal as practising school with the previous approval of the Syndicate.

Subjects of the Examination :

PART I.

Written Examination—5 papers carrying 100 marks each and each of three hours' duration.

PART II.

Practical Examination—carrying 300 marks.

Paper I : Theory of Education—Psychological.

Paper II : Theory of Education—Philosophical.

Paper III : Practice of Education—(Special Methods).

Paper IV : Educational Administration.

Paper V : History of Education.

In Part II of the Examination, candidates will be tested in their practical skill in class management and class teaching.

Standard of passing :

R. 7-E : To pass the examination in either Part I or Part II, a candidate must obtain not less than 40 per cent of the total number of marks for the said Part.

R. 7-F : To pass the whole examination, a candidate must satisfy the examiners in Parts I and II and obtain not less than 40 per cent of the total marks in each part.

EXAMINATION FOR THE DEGREE OF MASTER OF EDUCATION (M. ED.)

Admission :

O. 144 : Any person who has taken the Degree of Bachelor of Education of this University or a Degree of another University recognised as equivalent thereto may be admitted to the Examination for the Degree of Master of Education, after having fulfilled the requirements as mentioned in R. 8.

R. 8 : (a) The examination for the degree of M. Ed. shall be either by means of papers or partly by papers and partly by a dissertation which

shall be in lieu of one of the two optional sections selected by the candidate out of the four, mentioned in Group II in R. 8-D, or by thesis. The dissertation shall be intimately related to the subject matter of the Section in lieu of which it is offered. The Examination to be taken by thesis shall be on a subject connected with the history, theory and practice or administration of education.

(b) A candidate desiring to appear for the M.Ed. Examination wholly or partly by papers, must ordinarily attend a college or any other institution recognised for the purpose for one academic year after passing the B.Ed. Examination. In case of non-attendance at a college, the candidate shall work under the guidance of a recognised post-graduate teacher of the University for at least two years after passing the B.Ed. Examination.

(c) A candidate desiring to submit a thesis must have worked under the guidance of a recognised post-graduate teacher for at least two years subsequent to his passing the B.Ed. Examination. The thesis shall be the candidate's own work carried out under the guidance or supervision of the teacher and shall be either (i) a critical analysis of existing data, or (ii) a record of original investigation or (iii) a combination of these, and shall be accompanied by a certificate signed by the teacher stating that the thesis is worthy of examination.

Examination :

R. 8-D: The scheme of papers for the M.Ed. Examination is as under :

Each paper shall carry 100 marks and be of three hours' duration. The dissertation shall carry 200 marks.

GROUP I.

Paper I: Philosophy of Education (Compulsory).

Paper II: Advanced Educational Psychology (Compulsory).

GROUP II.

(Optional subjects—Four Papers)

Candidates shall have the option of selecting any two of the four Sections, A, B, C and D, each of which shall comprise two papers. Candidates may submit a dissertation in lieu of one of the two Sections offered by them :

Section A: History of Education.

Paper I: Ancient and Modern History of Indian Education.

Paper II: History of Education in general, including movements and reformers.

Section B: Administration of Education :

Paper I: Administration of Education in India and in some of the Indian States.

- Paper II (A) Principles of Educational Administration & Supervision.
(B) Administration of Education in the State of Bombay.

Section C: Comparative Education:

- Paper I: Education in England, Germany and the United States of America.
Paper II: Education in China, Japan, and the U.S.S.R., Special features of Primary & Adult Education in Turkey, Egypt, Ceylon, Phillipines and Denmark.

Section D: Experimental Education:

- Paper I: (a) Statistical Methods and (b) Techniques of Research in Education.
Paper II: Experimental Psychology.

Standard of passing:

R. 8-F: To pass the examination a candidate must obtain either (i) one-fourth of the full marks in each paper separately and in the dissertation, if any, and (ii) three-eighths of the total marks obtainable.

Those of the successful candidates who obtain 65 per cent or more of the total marks will be placed in the first class and those obtaining 50 per cent or more in the second class.

M.ED. EXAMINATION BY RESEARCH

R. 8-A: A candidate may submit this thesis at any time during the year subject to the provisions of O. 144-A, and shall submit it in triplicate with at least one set of diagrams (If any).

EXAMINATIONS IN COMMERCE.

Examination for the Degree of Bachelor of Commerce (B.COM.)

General:

O. 145: Candidates for the Degree of Bachelor of Commerce (B.Com.) must have passed the S.S.C. Examination with the required eligibility group for the Commerce course or an examination considered equivalent to it and will be required to pass two subsequent examinations, the first to be called the Intermediate examination in Commerce and the second, the Examination for the Degree of Bachelor of Commerce.

First Year Examination in Commerce—(F.Y. Com).

Admission:

O. 146: During the first year, there shall be no University examination for a candidate proceeding to a Degree in Commerce. Such a candidate will be permitted at the end of the first year to enter on a course for the Intermediate Examination in Commerce, provided that he

produces a certificate from the Principal of a Commerce college, showing that he has kept two terms at a college affiliated to the University and has satisfactorily carried out the work appointed by the University for the first two terms in Commerce and has satisfactorily gone through the course of physical training prescribed by the Syndicate from time to time, unless exempted on the ground that he is medically unfit to undergo such exercise, or that he is a member of the National Cadet Corps—Senior Division.

In order to go through the course of physical training satisfactorily, the student shall have attended the physical training class of his college for at least three-fourths of the number of periods.

Subjects of Examination :

R. 9: The following are the subjects prescribed by the University for the first two terms in Commerce :

GROUP A.

1. English : Two papers carrying 50 marks each and of 1½ hours' duration.
2. Composition in a Modern Indian Language or French or German. One Paper carrying 50 marks and of 1½ hours' duration. (Kannada, Marathi, Hindi and Urdu are the recognised Modern Indian Languages).

OR

An Additional Paper in English carrying 50 marks and of 1½ hours' duration.

3. Hindi : One Paper carrying 50 marks and of 2 hours' duration.

GROUP B.

4. Book-keeping and Commercial Arithmetic : One Paper carrying 100 marks and of three hours' duration.
5. Elements of Commerce : One Paper carrying 100 marks and of three hours' duration.
6. Salesmanship & Publicity : One Paper carrying 100 marks and of three hours' duration.

GROUP C.

7. Economics and Commercial Geography : One Paper carrying 100 marks and of three hours' duration.
8. Elements of Civics and Indian Administration : One Paper carrying 100 marks and of three hours' duration.

OR

Mathematics : One Paper carrying 100 marks and of three hours' duration

INTERMEDIATE COMMERCE EXAMINATION.

Admission :

O. 147: No candidate will be admitted to this examination unless after obtaining a certificate from the Principal of a Commerce College affiliated to this University, showing that he has satisfactorily carried out the work appointed by the University for the first two terms at a college or institutions recognised by this University in Commerce and produces satisfactory testimonials in the prescribed form that he has satisfactorily gone through the course of physical training prescribed by the Syndicate from time to time, unless exempted on the ground that he is medically unfit to undergo such exercise, or that he is a member of the National Cadet Corps—Senior Division.

In order to go through the course of physical training satisfactorily, the student shall have attended the physical training class of his college for at least three-fourths of the number of periods.

Subjects of the Examinations :

R. 10: Candidates will be examined in the following subjects:

GROUP A.

1. English: One Paper carrying 100 marks and of three hours' duration.
2. Commercial Correspondence and Composition: One Paper carrying 100 marks and of three hours' duration.
3. Composition in a Modern Indian Language or French or German: One Paper carrying 50 marks and of one and half hours' duration.

(Kannada, Marathi, Hindi and Urdu are the recognised Modern Indian Languages)

OR

An additional Paper in English carrying 50 marks and of one and half hours' duration.

GROUP B.

4. Elements of Economics: One Paper carrying 100 marks and of three hours' duration.
5. Forms of Economic Organisation (with special reference to India and the United Kingdom): One Paper carrying 100 marks and of three hours' duration.

GROUP C.

6. Accountancy: One Paper carrying 100 marks and of three hours' duration.
7. Any one of the following: One Paper carrying 100 marks and of three hours' duration.

- (i) Secretarial Practice or (ii) Insurance or (iii) Mathematics.

Standard of Passing :

R. 10-C : To pass the Examination a candidate must obtain 33 per cent of the full marks in each subject and 40 per cent in each group.

Those of the successful candidates who obtain 60 per cent of the total marks obtainable will be placed in the first class and those obtaining 50 per cent in the second class.

EXAMINATION FOR THE DEGREE OF BACHELOR OF COMMERCE.

Admission :

O. 148 : No candidate will be admitted to this examination unless, after passing the Intermediate examination in Commerce of this University, or an examination of any other University considered equivalent to the Intermediate examination in Commerce of this University, he shall have kept four terms at a college or institution recognised by this University in Commerce and unless he produces satisfactory testimonials in the prescribed form. Graduates in Commerce of other statutory Indian Universities and the University of Mysore, will be admitted to the B.Com. Degree Examination of this University after an attendance of four terms at a college affiliated to this University for the B.Com. Degree.

O. 148-A : A Bachelor in Arts of this University or of any other University recognised by this University, who has passed the Degree Examination with Economics, as one of the subjects, obtaining at least 30 per cent marks in the Paper in Economics will be admitted to the B.Com. Degree Examination of this University provided that—

- (i) he satisfies the Principal of a college affiliated in Commerce in the following subjects of the First Year Examination in Commerce :
 - (1) Book-keeping & Commercial Arithmetic,
 - (2) Economics & Commercial Geography,
 - (3) Elements of Commerce.
- (ii) he appears for the Intermediate Examination in Commerce after having kept two terms at a college recognised by this University in Commerce in the following subjects and is declared successful therein :
 - (1) Accountancy,
 - (2) Forms of Economic Organisation (with special reference to India and the United Kingdom) and
- (iii) he produces a certificate of having attended for a period of four terms at the B.Com. course at a college recognised by this University in Commerce.

Note : Those who have passed the M.A. Examination of this University with Economics Group 'C' are entitled to the same concessions as are given to Bachelors of Arts who have passed the Degree Examination with Economics as one of the subjects, even though the former did not take Economics for their B.A. Examination.

O. 148-B : A graduate in Arts of this University, who has passed with Honours in Economics will be admitted to the B.Com Examination of this University provided that—

- (i) he appears for the Intermediate Examination in Accountancy, without keeping terms and is declared successful therein ; and
- (ii) he produces a certificate of having attended for a period of four terms the B. Com. course at a college recognised by the University in Commerce.

Note : Those who have passed the M.A. Examination of this University in Economics with Groups 'C' and 'E' are entitled to the same concessions as are given to Bachelors of Arts who have passed the B.A. Examination with Honours in Economics even though the former did not take economics for their B.A. Examination.

O. 148 C : A candidate who has passed the B.A. (General or Special) Examination will be admitted to the B.Com. Examination of this University, subject to the following conditions :

- (i) that he produces a certificate of having attended for a period of two terms the B. Com. course at a commerce college affiliated to this University,
- (ii) that he appears for the Intermediate Commerce examination in Accountancy, and is declared successful therein either before or in the same examination season in which he appears for the B. Com. Examination.

A candidate who appears for the B. Com. Examination under the provisions of this Ordinance will be entitled to claim exemption from the Paper in English and from the following subjects at the B.Com. Examination provided that he has passed in the subjects at the B.A. Examination shown against them respectively.

B.Com.

Principles of Economics.
Modern Economic Development,

Statistics & Scientific Methods.

B.A.

Principles of Economics.
Indian Economic Problems &/or
Economic History.
Statistics or Statistical Methods.

Subjects of the Examination :

R. 11 : Candidates will be examined in the following subjects :

GROUP A.

1. English: One Paper carrying 100 marks and of three hours' duration.

GROUP B.

2. Principles of Economics: I and II: Two Papers carrying 100 marks each and each of three hours' duration.
3. Modern Economic Development: One Paper carrying 100 marks and of three hours' duration.

GROUP C.

4. Business Organisation: One Paper carrying 100 marks and of three hours' duration.
5. Mercantile Law: One Paper carrying 100 marks and of three hours' duration.
6. Statistics and Scientific Methods: One Paper carrying 100 marks and of three hours' duration.

GROUP D.

7. Any one of the following special subjects:
3 papers carrying 100 marks each and each of 3 hours' duration.
 - (i) Accounting and Auditing.
 - (ii) Actuarial Science.
 - (iii) Banking
 - (iv) Economics of Cotton.
 - (v) Public Finance and Administration.
 - (vi) Statistics.
 - (vii) Transport.

N.B.: Candidates can choose Actuarial Science or Statistics, only if they have taken Mathematics as their optional subject at the Intermediate examination in Commerce.

Standard of passing:

R. 11-B: To pass the examination, the candidate must obtain 33 per cent of the full marks in each subject and 40 per cent in each group.

Those of the successful candidates who obtain 60 per cent of the total marks obtainable will be placed in the first class and those obtaining 50 per cent in the second class.

EXAMINATIONS IN THE FACULTY OF SCIENCE.

General

O. 150: Candidates for the degree of Bachelor of Science must have passed the S.S.C. Examination with the required eligibility group for the science course or any other equivalent examination and will be

required to pass two subsequent examinations the first to be called the Intermediate examination in Science and the Second, Examination for the Degree of Bachelor of Science.

First Year Examination in Science (F. Y. Sc.)

O. 151: During the first year, there shall be no University examination for a candidate proceeding to a Degree in Science. A candidate for being permitted at the end of the First Year to enter on a course for the Intermediate Examination in Science shall have to produce a certificate from the Principal of a college showing that he has kept two terms at a college affiliated to the University and has satisfactorily carried out the work appointed by the University for the first two terms and that he has satisfactorily gone through the course of physical training prescribed by the Syndicate from time to time, unless exempted on the ground that he is medically unfit to undergo such exercise or that he is a member of the National Cadet Corps—Senior Division.

In order to go through a course of physical training satisfactorily, the student shall have attended the physical training class of his college for at least three-fourths of the number of periods assigned for physical training by the college.

Where a candidate has kept two terms at a college or colleges affiliated to the University, but has not been certified to have satisfactorily carried out the work appointed by the University for the first two terms in Science and has joined another college, the Principal of the new college may issue to him the certificate contemplated by the Ordinance, provided that the candidate has kept at least one term in his college and that he has satisfactorily carried out the work appointed for the first two terms to the satisfaction of the Principal.

O. 151 A: Students who have taken up either Arts or Commerce course for the First Year College Examination of an affiliated college, will be permitted by the Principal to change over to the Science course any time during the year if they are eligible to the new course and that they are able to keep the minimum attendance of 65 days in the first year class during the second term in the new changed group.

Subjects of the Examination:

R. 13: Candidates will be examined in the following subjects:

1. English: (Prose, Poetry & Composition with Texts) One Paper of 100 marks and of three hours' duration.

Note: A book shall be recommended as an aid to the art of writing. No questions with reference to the context will be asked.

2. Hindi with Texts: Details will be announced later.
3. Second Language: A Modern Indian Language with texts or an additional Paper in English with Texts or a Classical Lan-

guage with texts or a Modern European Language with texts : One Paper carrying 100 marks and of three hours' duration.

4. Physics : 2 Papers carrying 60 marks each and of two hours' duration and one Practical examination carrying 80 marks and of three hours' duration.
5. Chemistry : Two Papers of Two Hours' each and carrying 60 marks each, and one practical examination of 80 marks and of three hours' duration.
 - (i) Mathematics : Two Papers, each of 100 marks and of three hours' duration.
 - (ii) Biology : Two Papers each of 60 marks and of 2 hours' duration and one practical examination carrying 80 marks and of three hours' duration.

OR

- (iii) Geology and Geography : Two Papers, one for each of the subjects, each of 2 hours' duration and carrying 60 marks, and two practical examinations of 2 hours' duration, carrying 40 marks in each of the subjects of geology and geography.

INTERMEDIATE SCIENCE EXAMINATION.

Admission :

O. 152. No candidate will be admitted to this examination unless after obtaining a certificate from the Principal of a college showing that he has satisfactorily carried out the work appointed by the University for the first two terms in the First Year course in Science, kept two terms at a college affiliated to this University for the purposes of the Intermediate Examination in Science and unless he produces satisfactory testimonials in the prescribed form that he has satisfactorily gone through the course of physical training prescribed by the Syndicate, from time to time, unless exempted on the ground that he is medically unfit to undergo such exercise, or that he is a member of the National Cadet Corps—Senior Division.

In order to go through a course of physical training satisfactorily the student shall have attended the physical training class of his college for at least three-fourths of the number of periods assigned for physical training by the college.

O. 152-D : A candidate who has passed the B.Sc. (Agri.) Examination of this University will be permitted to appear for the Intermediate Examination in Science without keeping terms and with exemption at his option, from the subjects of Physics, Chemistry, Biology or Geology. A candidate so exempted shall not be eligible for a class or a University award.

R. 14: Candidates will be examined in the following Heads:—

1. English: One Paper of 100 marks and of three hours' duration.
2. Second Language: A Modern Indian language with texts or an additional paper in English with texts or a Classical language with texts or a Modern European language with texts: One paper carrying 100 marks and of three hours' duration.
3. Hindi (with texts) Details will be announced later.
4. Physics: 2 Papers carrying 60 marks each and of two hours' duration and one practical examination carrying 80 marks and of three hours' duration.
5. Chemistry: 2 Papers of two hours' each and carrying 60 marks each, and one practical examination of 80 marks and of three hours' duration.
6. Any one of the following subjects:
 - (i) Mathematics: 2 Papers, each of 100 marks and of three hours' duration.
 - (ii) Biology: 2 Papers each of 60 marks and of two hours' duration and one practical examination of four hours' duration and carrying 80 marks.
 - (iii) Geology and Geography: 2 Papers, one for each of the subjects, each of two hours' duration and carrying 60 marks and two practical examinations of two hours' duration, carrying 40 marks in each of the subjects of Geology and Geography.

Standard for passing:

R. 14-B.: To pass the examination, a candidate must obtain, except in the Head of English Composition and Modern Indian Language or an Additional Paper in English, 33 per cent of the full marks in papers in each head and in each practical examination. In Mathematics, a candidate must obtain 33 per cent of the total marks in the head of English composition and Modern Indian Language or an Additional Paper in English a candidate must obtain 30 per cent of the marks. Those of the successful candidates who obtain 60 per cent of the total marks obtainable will be placed in the first class, and those obtaining 45 per cent in the second class.

EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE.

Admission:

O. 153: No candidate will be admitted to the examination unless after passing the Intermediate examination in Science of this University or an examination of any other University considered equivalent to the Intermediate examination in Science of this University, he produces satisfactory testimonials in the prescribed form that he has kept four

terms at a college or institution recognised for the purposes of the examination for the Degree of Bachelor of Science of the Karnatak University.

Subjects of the Examination :

R. 15: Candidates must select any two of the following subjects, one of them being the Principal subject and the other subsidiary. A student, who takes the group of Physics and Chemistry for the B.Sc. Examination, shall take a course in Calculus, irrespective of the fact whether Physics is his Principal or his subsidiary subject.

1. Mathematics & Statistics.
2. Physics.
3. Chemistry.
4. Botany.
5. Zoology.
6. Geology.
7. Microbiology.
8. Animal Physiology.
9. Comparative Anatomy & Embryology.
10. Experimental Psychology.
11. Geography (As a Subsidiary subject only).

R. 15 B: (a) There shall be 600 marks for a Principal subject, each paper and each practical examination in subjects other than Physics and Chemistry, to carry 75 marks when there are four papers and four practical examinations or eight papers and each paper and each practical examination to carry 100 marks when there are three papers and three practical examinations. In Physics, there shall be four papers carrying 100 marks each and four practical examinations each of them carrying 50 marks. In Chemistry, there shall be four papers carrying 100 marks each and four practical examinations carrying an aggregate of 200 marks.

(b) There shall be 300 marks for a subsidiary subject, each paper or practical examination carrying 75 marks in all the subjects except Physics and Chemistry. In Physics and Chemistry, there shall be two papers of 100 marks each, and two practical examinations, each of them carrying 50 marks.

Scheme of papers and practicals in each subject :

Mathematics (as a subsidiary subject) : Four papers of three hours' each and carrying 75 marks each :

Subjects comprised: (i) Pure Mathematics, (ii) Applied Mathematics, (iii) Algebra and Geometry, (iv) Calculus and Differential Equa-

tions, (v) Mechanics, (vi) Astronomy, Electricity and Magnetism and (vii) Statistics.

Physics (as a subsidiary subject) : There will be two papers and two practical examinations of not more than three hours' each.

Physics (as a principal subject) There will be four papers and four practical examinations of not more than three hours' each.

Chemistry (As a subsidiary subject) : Two Papers and two day's practical Examination.

Chemistry (as a principal subject) : Four papers and at least three days' practical examination.

Botany (as a subsidiary subject) : Two papers, each carrying 75 marks and two practical examinations each carrying 75 marks.

Botany (as a principal subject) Four papers each carrying 75 marks and four practical, examinations each carrying 75 marks.

Zoology (as a subsidiary subject) : Two papers and two practical examinations, each paper and each practical will carry 75 marks.

Zoology (as a principal subject) : Four papers and four practical examinations.

Geology (as a subsidiary subject) : Two papers and two practical examinations each carrying 75 marks.

Geology (as a principal subject) : Four papers and four practical examinations.

Animal Physiology (as a subsidiary subject) : Two papers and two practical examinations.

Animal Physiology (as a principal subject) : Three papers, three practical examinations and an oral examination with reference to the special branch of the subject selected by the candidate.

Microbiology (As a subsidiary subject) : Two papers, two practical examinations and an oral examination.

Microbiology (as a principal subject) : Three papers, three practical examinations and an oral examination.

Comparative Anatomy and Embryology (as a subsidiary subject) : Two papers, two practical examinations and an oral examination.

Comparative Anatomy and Embryology (as a principal subject) : Four papers, four practical examinations and an oral examination.

Experimental Psychology (as a subsidiary subject) : Two papers and two practical examinations.

Experimental Psychology (as a principal subject) : Three papers and three practical examinations.

Geography : (as a subsidiary subject only) : Two papers carrying 75 marks and of three hours' duration each, and a practical examination.

Standard of passing :

R. 15-C : To pass the examination, a candidate must obtain in each subject thirty-three per cent marks separately in the papers taken together and in the practical examinations taken together, as in Mathematics in all the papers taken together. Those of the successful candidates who obtain forty per cent of the total marks in the subsidiary subject and 48 per cent of the total marks in the principal subject will be placed in the second class. Those of the successful candidates who obtain forty-five per cent of total marks in the subsidiary subject and sixty per cent of the total marks in the principal subject will be placed in the first class. Also those of the successful candidates who obtain forty-eight per cent of the total marks in the subsidiary and principal subjects taken together, will be placed in the second class, provided they obtain at least forty-five per cent in the principal subject and those who obtain sixty per cent of the total marks in the subsidiary and principal subjects taken together will be placed in the first class provided they obtain fifty-five per cent at least in the principal subject. All those candidates who are placed in the first or in the second class shall be declared to have passed the B.Sc. Examination with Honours in the first or second class as the case may be. Of the candidates placed in the first class, those who obtain sixty-six per cent marks or more in the principal subject will be declared to have passed with distinction in that subject.

EXAMINATION FOR THE DEGREE OF MASTER OF SCIENCE.

(M. SC.)

Admission :

O. 154 : Any person who has taken the Degree of Bachelor of Science of this University or a Degree of another University recognised as equivalent thereto, may after he has worked under the guidance of a University teacher for at least two years subsequent to his passing the Bachelor of Science examination, be admitted to the examination for the degree of Master of Science in any one of the branches mentioned in R. 16-G.

R. 16 : The M.Sc. Degree may be taken—

- (1) by research alone,
- (2) by written examination & practical (where possible).

Subjects of the Examination :

The examination will comprise the following subjects :

- (1) Mathematics and Statistics, (2) Physics, (3) Chemistry, (4)

Botany, (5) Zoology (including Comparative Anatomy and Embryology and (6) Geology.

Standard of passing :

For Organic Chemistry (Revised).

R. 16 K : In order to pass the examination, the candidate must secure at least 20 per cent of the marks allotted to each paper and an aggregate total of 40 per cent in theory and a total of at least 40 per cent of the marks allotted to the practical examination.

Of the successful candidates those who obtain 50 per cent of the total marks in theory and practicals put together will be placed in the second class and those who obtain 66 per cent or more of the total marks in theory and practicals put together will be placed in the first class.

For Mathematics and Statistics: The same as for the M.A. Examination in Mathematics and Statistics.

Other Subjects :

Candidates shall be required to obtain 40 per cent of the aggregate of the marks assigned to papers and 40 per cent of the aggregate of the marks assigned to practicals.

Of the successful candidates those who obtain 65 per cent or more of the grand total in both papers and practicals taken together will be placed in the first class and those who obtain 50 per cent or more will be placed in the second class.

EXAMINATIONS IN THE FACULTY OF LAW.

Degree of the Bachelor of Laws.

O. 155: Candidates for the degree of the LL.B., must have passed the Intermediate examination in Arts, the Intermediate examination in Commerce or Intermediate examination in Science of this University or the Intermediate examination in Arts, Intermediate examination in Commerce or the Intermediate examination in Science of any other University or Board of Intermediate Education recognised as equivalent to the corresponding examination of this University and will be required to pass three examinations, the first to be called the 'Law Preliminary Examination', the second to be called 'The First Examination for the Degree of LL.B.' and the third to be called the 'Second Examination for the Degree of LL.B.'.

O. 155 A: Candidates who have passed the Bachelor's Degree Examination of this University in the Faculties of Arts, Commerce or Science or of any other University recognised as equivalent thereto will not be required to pass the Law Preliminary Examination and will be entitled to enter upon the course for the first examination for the Degree of LL.B.

O. 155-B: Candidates who have passed the Bachelor's Degree Examination of this University in Agriculture, Medicine or Engineering or in any other Faculty except Arts, Commerce or Science or of any other University recognised as equivalent thereto, will be eligible for admission to the Law Course but will be required to, pass the Law Preliminary Examination as mentioned above.

LAW PRELIMINARY EXAMINATION.

Admission to the Examination :

O. 156: No candidate shall be admitted to this examination unless he has passed the Intermediate Examination in Arts, Intermediate Examination in Commerce or Intermediate Examination in Science of this University or an equivalent examination of any other University or Board of Intermediate Education or has passed the Bachelor's Degree Examination of this University in Agriculture, Medicine or Engineering or in any other Faculty except Arts, Commerce or Science of any other University recognised as equivalent thereto and has thereafter kept two terms in a Law or an Arts college affiliated to this University.

Syllabus for the examination.

R. 17: Candidates will be required to answer the following five papers, each carrying 100 marks and of three hours' duration :

Paper I: English—Prose and Poetry.

Paper II: English—Essay, Precis & Composition.

Paper III: Outlines of Social, Economic & Constitutional History of India from 1773 to 26th January, 1950.

Paper IV: History and Development of Social Institutions.

Paper V: Theory of Politics (Excluding the portion on Governmental machinery).

Standard of passing :

R. 17-B: To pass the Examination the candidate must obtain one-third of the full marks in each paper. Those obtaining 45 per cent or more in the aggregate shall be declared to have passed the examination in the second class. Those obtaining 60 per cent or more in the aggregate shall be declared to have passed the examination in the first class.

FIRST EXAMINATION FOR THE DEGREE OF BACHELOR OF LAWS :

Admission to the Examination :

O. 157: No candidate shall be admitted to this examination unless he has passed the Law Preliminary Examination of this University or other University recognised by this University as equivalent thereto or the Bachelor's Degree Examination of this University in the Faculty of Arts, Commerce or Science or of any other University recognised by

this University as equivalent thereto and has kept two terms in a Law College affiliated to this University.

Provided that any other candidate who has not passed the Bachelor's Degree Examination of this University in the Faculties of Arts, or Commerce or of any other University recognised by this University as equivalent thereto may be admitted to this examination if he has kept either both the terms under the old rules or one term under the old rules and the second term under the new rules.

Provided further that such candidates shall not be declared to have passed the 1st LL.B. examination unless he has passed in English, Essay, Composition and Precis Paper at the Law Preliminary Examination held either in a previous or in the same examination season.

Syllabus for the Examination:

R. 18: Candidates will be required to answer the following six papers each carrying 100 marks and of three hours' duration:

Paper—I: Law of Crimes with special reference to Indian Penal Code.

Paper—II: The Law of Torts.

Paper—III: Principles of the Law of Contract with special reference to the First 75 sections of the Contract Act.

Paper—IV: The Principles of the Law of Indemnity, Bailments, Surety, Agency, Sale of Goods, Partnership and negotiable instruments.

Paper—V: Elements of Constitutional Law.

Paper—VI: Indian Constitution.

Standard of Passing:

R. 18-B: To pass the examination, the candidate must (a) obtain one third of the full marks in each Paper and (b) obtain one half of the total marks obtainable. Those of the successful candidates who obtain two thirds or more of the total marks obtainable will be placed in the first class.

Second Examination for the Degree of Bachelor of Laws. Admission to the Examination:

O. 158: No candidate will be admitted to the examination unless he shall have passed the first examination for the degree of LL.B. in this University and after passing the said examination shall have kept two terms in a Law college affiliated to this University.

Subjects of the Examination:

R. 19-A: Candidates will be required to answer the following six papers, each carrying 100 marks and of three hours' duration:

Paper—I: Hindu Law.

Paper—II: Mohamedan Law and the Indian Succession Act.

Paper—III: Law of Property, Easements and Registration Act.

Paper—IV: Equity, Trust and Specific Relief.

Paper—V: Elements of Public International Law and Jurisprudence.

Paper—VI: Private International Law (Conflict of Laws).

Standard of passing :

R. 19-C: To pass the Examination the candidate must (a) obtain one third of the full marks in each paper and (b) obtain one half of the total marks obtainable. Those of the successful candidates who obtain two thirds or more of the total marks obtainable will be placed in the First Class.

LL.M. COURSE

Admission to the course :

O. 159: No candidate shall be admitted to the examination for Degree of LL.M. unless he has passed the second examination for the Degree of LL.B. in this University or an examination of another University recognised as equivalent thereto :

- (a) not less than two years previously, if he has passed the Second Examination for the Degree of LL.B. under the old rules and
- (b) not less than three years previously, if he has passed the Second Examination for the Degree of LL.B. under the revised rules provided that the candidate need not read for more than two years under the guidance of a recognised University teacher.

O. 159-A: A candidate shall not be permitted to present a thesis for the degree of LL.M. unless he shall have worked under the guidance of a recognised University teacher for the required period i.e. two years if he has passed the LL.B. Degree Examination under the old rules and three years if he has passed the said examination under the new rules.

Subjects of the Examination :

R. 20: The Degree of LL.M. may be taken either by written examination or by thesis.

R. 20-A: Candidates for the written examination will be examined in any one of the following four branches :

Branch I :

Paper—I: Jurisprudence,

Paper—II: Roman Law.

Paper—III: International Law (Public & Private)

Paper—IV: Principles of Legislation.

Paper—V: Constitutional Law (British and Indian)

Paper—VI: Essay.

Branch II :

Papers I, II, III and VI : (Essay) Hindu or Mohamedan Law as the case may be.

Paper IV : Testamentary and Intestate succession (excluding Hindu and Mohamedan Law).

Paper—V : Marriage, Divorce and Guardianship (excluding Hindu and Mohamedan Law).

Branch III :

Papers I and II : Real Property (including the Law of Vendors and Purchasers, Mortgages, Gifts and Leases : and the Law relating to Mines and Minerals, Foreshore and seashore.

Paper—III : Principles of Equity with special reference to the Law of Trusts and Specific Relief.

Paper—IV : The Law Easement and Prescription.

Paper—V : Customary and Statute Law relating to land Tenure in India. ..

Paper—VI : Essay

Branch IV :

Paper—I : The Law of Contracts (including Sale of goods, Agency, and Partnership).

Paper—II : Companies and Insolvency.

Paper—III : Mercantile and Maritime Law.

Paper—IV : The Law of Torts.

Paper—V : The Law of Crimes.

Paper—VI : Essay.

Standard of passing :

R. 20-F : To pass the examination, the candidate must obtain 50 per cent of the full marks in each paper. Those of the successful candidates who obtain 66 per cent of the total marks obtainable will be placed in the first class.

EXAMINATIONS IN THE FACULTY OF ENGINEERING.**ADMISSION TO THE EXAMINATION.***General*

O. 160 : A candidate for the Degree of Bachelor of Engineering must produce a certificate showing that he has passed the Intermediate Examination in Science with Physics, Chemistry and Mathematics of the Karnatak University or any examination or examinations recognised as equivalent to this Examination.

O. 160-A : A candidate will be required to pass three examinations :

(i) First Examination in Engineering,

- (ii) Second Examination in Engineering (Civil),
- (iii) Examination for the Degree of Bachelor of Engineering (Civil).

O. 160-B: A candidate for the Degree of Bachelor of Engineering must produce a certificate showing that he has passed the Intermediate Examination in Science of this University with Mathematics as optional subject or the Intermediate Examination in science of a University recognised by this University in the groups of Mathematics, Physics, and Chemistry or a certificate of having passed the Intermediate Arts Examination with Mathematics as the optional subject and the B.A. Examination with Physics and Chemistry as the optional group.

O. 160-C: No candidate will be admitted to the Second Examination in Engineering (Civil) unless he produces satisfactory testimonials of having kept two terms, after passing the First Examination in Engineering in a College affiliated to the Karnatak University in Engineering.

O. 160-D: No candidate will be admitted to the examination for the Degree of Bachelor of Engineering (Civil) unless he produces satisfactory testimonials of having kept two terms after passing the Second Examination in Engineering (Civil) in a college affiliated to the Karnatak University in Civil Engineering.

Syllabus:

(1) First Examination in Engineering:

R. 21: Candidates will be examined in subjects 1 to 9 specified below: Details of the course in each subject will be specified from time to time by the Academic Council on the recommendation of the Board of Studies.

- | | | |
|------------------------------|---|--------|
| 1. Mathematics I. | One Paper carrying 100 marks and of three hours' duration. | |
| 2. Mathematics II. | — do — | — do — |
| 3. Applied Mechanics. | — do — | — do — |
| 4. Construction I. | — do — | — do — |
| 5. Surveying I. | Term work carrying 25 marks. One Paper carrying 100 marks and of three hours' duration. | |
| | Term work carrying 50 marks and a practical examination carrying 25 marks. | |
| 6. Machine Drawing. | One Paper carrying 100 marks and of four hours' duration. | |
| | Term work carrying 50 marks. | |
| 7. Electrical Engineering I. | One Paper carrying 100 marks and of three hours' duration. | |
| 8. Heat Engines I. | — do — | — do — |

9. Workshop Practice. Practical Examination carrying 100 marks and term work carrying 50 marks. (College certificate)

(ii) *Second Examination in Engineering :*

R. 22 : Candidates will be examined in the following subjects 1 to 9 in the manner specified below. Details of the course in each subject will be specified from time to time by the Academic Council on the recommendations of the Board of Studies.

- | | |
|--|--|
| 1. Mathematics III. | One Paper carrying 100 marks and of three hours' duration. |
| 2. Materials & Structures. | — do —
Term work carrying 25 marks. |
| 3. Construction II. | One Paper carrying 100 marks and of three hours' duration. |
| 4. Drawing and Design. | — do —
Term work carrying 50 marks.
Practical examination—Oral and sketching carrying 50 marks. |
| 5. Surveying II. | One Paper carrying 100 marks and of three hours' duration.
Term work carrying 25 marks.
Practical Examination carrying 50 marks. |
| 6. Hydraulics. | One Paper carrying 100 marks and of three hours' duration.
Term work carrying 25 marks. |
| 7. Electrical Engineering II. | One Paper carrying 100 marks and of three hours' duration.
Term work carrying 25 marks.
Practical Examination carrying 50 marks. |
| 8. Heat Engines & Hydraulic Machinery. | One Paper carrying 100 marks and of three hours' duration.
Term work carrying 25 marks
Practical Examination carrying 50 marks. |
| 9. Engineering Geology. | One Paper carrying 100 marks and of three hours' duration.
Practical Examination carrying 50 marks. |

(iii) *Bachelor of Engineering (Civil).*

R. 23 : Candidates will be examined in the following subjects 1 to 10. Details of the courses in each subject will be specified from time to

time by the Academic Council on the recommendations of the Board of Studies :

- | | |
|---|--|
| 1. Theory of Structures I. | One Paper carrying 100 marks and of three hours' duration. |
| 2. Theory of Structures II. | — do — |
| 3. Construction III. | — do — |
| 4. Roads, Railways and Bridges. | — do — |
| 5. Irrigation & Storage. | — do — |
| 6. Water Supply & Sanitary Engineering. | — do — |
| 7. Structural Drawing and Design. | One Paper carrying 100 marks and of four hours' duration.
Term work carrying 50 marks.
Oral and sketching carrying 50 marks. |
| 8. Project Drawing. | Term work carrying 50 marks.
Oral and sketching carrying 50 marks. |
| 9. Quantity Surveying and Costing. | College Certificate only.
Term work carrying 50 marks.
Oral examination carrying 50 marks. |
| 10. Engineering Economics & Works Management. | College Certificate only. |

Standard of Passing :

The following is the standard of passing which is applicable to the examinations in the Faculty of Engineering mentioned above.

To pass an examination in the Faculty of Engineering a candidate must obtain 33 per cent of the full marks in each subject. Where there is a practical examination also, a candidate must obtain 33 per cent separately in the written and in the practical examination. Where 'Term work' is specifically mentioned separately as in Drawing subjects, a candidate must obtain 33 per cent separately in the 'Term work' also.

In addition, a candidate must obtain a minimum of 45 per cent of the total marks obtainable for being declared to have passed the examination.

Those of the candidates who secure 55 per cent or more marks in the aggregate and have passed an examination at one sitting will be declared to have passed the examination in the Second Class.

Those of the candidates who secure 66 per cent or more marks in the aggregate and have passed an examination at one sitting will be declared to have passed the examination in the first class..

EXAMINATIONS IN THE FACULTY OF AGRICULTURE.

*Admission to the examination.***General :**

O. 164: Candidates for the Degree of Bachelor of Science (Agri) must have passed the Matriculation Examination or the S. S. C. Examination or an examination held equivalent to it and will be required to pass three subsequent examinations, the first to be called the Intermediate Examination in Science (Agri), the second, the second examination in Science (Agri) and the third, the Examination for the Degree of Bachelor of Science (Agriculture). On the recommendation of the Board of Studies, the Academic Council may, from time to time, prescribe text-books in the various subjects of these examinations and modify from time to time, as may be found necessary, the details of the theoretical and practical courses laid down for these examinations.

(i) *Intermediate Examination in Science (Agri).*

O. 165: The syllabus of the Intermediate in Science (Agri) will be covered during a period of two years. The candidate will have the option to take the examination in one or more subjects of the First Year Course in Intermediate Examination Science in (Agri) at the end of the first year itself or at the end of the second year together with the subjects of the second year course in Intermediate Examination in Science (Agri).

First Year Course :

O. 165-A: No candidate will be admitted to this examination unless he has kept two terms in a college recognised in Agriculture recognised by this University subsequent to his passing the Matriculation or the S. S. C. or an equivalent examination and has produced a certificate from the Principal of the College of having carried out satisfactorily the extra curricular work on agricultural extension.

Syllabus :

R. 27: Candidates will be examined in the following subjects:

(1) English, (2) Modern Indian Language or an Additional Paper in English, (3) Agronomy and Animal Husbandry, (4) Botany I, (5) Chemistry I, (6) Mathematics and Biometry, (7) Physics I, (8) Elementary Zoology and (9) Carpentry and Smithy.

The papers on subjects other than English and Modern Indian Language or an Additional Paper in English carrying 100 marks and of 3 hours' duration and Practical in each subject carrying 100 marks.

(ii) *Intermediate Examination in Science (Agri) :**Second Year Course :**Admission :*

O. 166: No candidate will be admitted to this examination unless he has kept four terms in a college recognised in Agriculture by this

University subsequent to his passing the Matriculation or the S. S. C. or an equivalent examination and has produced a certificate from the Principal of the College of having carried out satisfactorily the extra-curricular work on agriculture extension.

Syllabus :

R. 28 : Candidates will be examined in the following subjects :

(1) English, (2) Modern Indian Language or an Additional Paper in English, (3) Agronomy, (4) Animal Husbandry, (5) Botany II, (6) Chemistry II, (7) Soils, (8) General Bacteriology and (9) Physics II.

There will be one Paper for each of the subjects carrying 100 marks and of 3 hours' duration. Except English and the Modern Indian Language or Additional Paper in English, there will be practicals in each of the other subjects, carrying 100 marks. There will be an Oral Examination in English carrying 50 marks.

Standard of Passing :

(Applicable to I.Sc. (Agri) 1 Year also.)

R. 28-C : Candidates for the Intermediate Examination in Science (Agri) must obtain, in order to pass, forty per cent of the total number of marks obtainable, forty per cent of the marks obtainable in Agronomy and Animal Husbandry papers and practicals separately and thirty-three per cent in the remaining subjects, papers and practicals separately.

(iii) *Second Examination in Science (Agri) :*

Admission :

O. 167 : No candidate will be admitted to this examination unless he has kept two terms in a college recognised in Agriculture by this University subsequent to passing the Intermediate Examination in Science (Agri) and has produced a certificate from the Principal of the college of having carried out satisfactorily the extra-curricular work on agricultural extension.

Syllabus :

R. 29 : Candidates will be examined in the following subjects :

(1) Agronomy, (2) Animal Husbandry, (3) Agricultural Botany, (4) Agricultural Chemistry, (5) Elements of Economics, (6) Plant Pathology and (7) Agricultural Entomology.

The distribution of marks for the above subjects is as under :

- | | |
|-----------------------|---|
| 1. Agronomy : | Two Papers, each of three hours' duration and each carrying 100 marks and a practical examination of 200 marks. |
| 2. Animal Husbandry : | One Paper carrying 100 marks and of three hours' duration and a practical examination of 100 marks. |

- | | |
|------------------------------|---|
| 3. Agricultural Botany : | One Paper carrying 100 marks and of three hours' duration and a practical examination of 100 marks. |
| 4. Agricultural Chemistry : | Two Papers each carrying 100 marks and of three hours' duration and a practical examination of 100 marks. |
| 5. Elements of Economics : | One Paper carrying 100 marks and of three hours' duration. |
| 6. Plant Pathology : | One Paper carrying 100 marks and of three hours' duration and a practical examination of 100 marks. |
| 7. Agricultural Entomology : | One Paper carrying 100 marks and of three hours' duration and a practical examination carrying 100 marks. |

Standard of Passing :

R. 29-C: All candidates for the second examination in Science (Agri) must obtain in order to pass, forty per cent of the total number of marks obtainable, forty per cent of the marks obtainable in Agronomy and Animal Husbandry Papers and practicals separately, and thirty-three per cent in the remaining subjects, papers and practicals separately.

(iv) Examination for the Degree of Bachelor of Science (Agri)

Admission to the Examination :

O. 168: No candidate will be admitted to this examination unless he has kept two terms in a college recognised in Agriculture by this University subsequent to passing the second examination in Science (Agri) and has produced a certificate from the Principal of the College of having carried out satisfactorily the extra-curricular work on agricultural extension.

Syllabus :

R. 30: Candidates will be examined in the following subjects :

(1) Agronomy, (2) Animal Husbandry and Dairying, (3) Agricultural Engineering, (4) Veterinary Science, (5) Horticulture, (6) Agricultural Economics, (7) Essay writing and Public Speaking.

The distribution of marks for the above subjects is as under :

- | | |
|----------------------------------|---|
| 1. Agronomy : | One Paper carrying 100 marks and of three hours' duration and a practical examination of 100 marks. |
| 2. Animal Husbandry & Dairying : | —do— |
| 3. Agricultural Engineering : | —do— |
| 4. Veterinary Science : | —do— |
| 5. Horticulture : | —do— |

6. Agricultural Economics : One Paper carrying 100 marks and of three hours' duration.
7. Essay Writing & Public Speaking : College Certificate.

Standard of Passing :

R. 30-D : All candidates for the Examination for the Degree of Bachelor of Science (Agri) must obtain, in order to pass, forty per cent of the total number of marks obtainable, and forty per cent of the marks obtainable in Agronomy and Animal Husbandry and thirty-three per cent in each of the remaining subjects. These percentages must be obtained separately in the Papers and in the Practical Examination in each subject. Candidates who obtain fifty per cent of the total in the aggregate of the three examinations will be considered to have passed with Honours. Those candidates who obtain sixty per cent of the total in the aggregate of the three examinations will be placed in the First Class. Of the candidates placed in the First Class those candidates who obtain sixty per cent of the total marks of each of the three examinations separately will be declared to have passed with distinction.

DEGREE OF THE MASTER OF SCIENCE (AGRICULTURE).

Admission to the Examination :

O. 169 (a) : Any person who has taken the Degree of Bachelor of Science (Agri) of this University or a Degree of another University recognised as equivalent thereto, may after he has worked under the guidance of a University teacher for at least two years subsequent to his passing the Bachelor of Science (Agri) Examination, be admitted to the Examination for the Degree of Master of Science (Agri). (b) On a new application being forwarded and a fresh fee paid, a candidate who has already passed the examination in one branch may appear on a subsequent occasion in a different branch.

R. 31 : The M.Sc. (Agri) Degree may be taken—

- (i) by research alone,
- (ii) by written examination & practical (where possible) or
- (iii) by research & examination combined.

R. 31-F : The written examination and practical (where possible) referred to in R. 31 (ii) will comprise the following :

(1) Agronomy, (2) Soil Science, (3) Agricultural Chemistry, (4) Agricultural Botany, (Plant Physiology and Plant Breeding), (5) Plant Pathology, (6) Entomology, (7) Horticulture, (8) Agricultural Economics, (9) Animal Husbandry and (10) Dairy Science.

Standard of Passing :

R. 31-K: Candidates taking the Examination by Papers and Practicals shall be required to obtain 40 per cent of the aggregate of the marks assigned to Papers and 40 per cent of the aggregate marks assigned to practicals.

Of the successful candidates those who obtain 65 per cent or more of the grand total in both the papers and practicals taken together will be placed in the first class and those who obtain 50 per cent or more will be placed in the second class.

*Examinations in the Faculty of Medicine.**General :*

O. 170: Candidates for the Degrees of M.B., B.S. for being eligible for admission to a Medical College affiliated to this University—

(i) shall have attained the age of 17 years or shall attain that age within four months of his admission to the college.

(ii) must have passed the Intermediate Examination in Science in the written part and the practicals of this University with Biology as their optional subject, or an equivalent examination of another recognised University or body in the subjects of Physics, Biology and Chemistry including Organic Chemistry—both theoretical and practical as part of the syllabus for the said examination.

(Biology or Natural Science, Physics and Chemistry including Organic Chemistry—both theoretical and practical—would be herein-after known as the medical group of Intermediate Examination in Arts or Science.)

(a) Provided that candidates who have not passed in any practical test at the Intermediate Science Examination with the Medical Group, but have passed the B.Sc. Examination with the same subject or subjects, including the practical test prescribed in the subject or subjects, will not be required to appear for the practical examination in subject or subjects concerned at the Intermediate Science again in the event of their intending to join a Medical College.

(b) Candidates who have passed the Intermediate Examination with Physics, Biology and Chemistry without the inclusion of Organic Chemistry shall be required to put in a course in that subject for a period of six months and satisfy in a test (written and practical) in that subject held by the college before being permitted to appear for their First M.B.B.S. Examination.

O. 170-A: Candidates for the Degree of M.B.B.S. shall be required to undergo a period of certified study extending over four and a half academic years. After a period of study extending over one and a half years in the subjects specified in O. 171 the candidates, on the production of the necessary certificates, will be entitled to appear for the First M.B.B.S. Examination. After passing the First M.B.B.S. Examination,

candidates shall be required to spend three years in continuous study of the clinical group of subjects and pass the Second M.B.B.S. Examination before being entitled to appear in the subjects of the Third M.B.B.S. Examination. The Degree of M.B.B.S. shall not be conferred upon a candidate unless he undergoes training for a period of twelve months in the manner prescribed in O. 173 C subsequent to his passing the Final Examination.

Subjects of the First M.B.B.S. Examination :

R. 32: Candidates will be examined in the following subjects:

- (i) Human Anatomy (including Histology), Elements of Human Embryology and Principles of Genetics.
- (ii) Human Physiology (including experimental Physiology). Bio-chemistry and Bio-physics.

There will be two papers of 100 marks and of 3 hours' duration on (i) and (ii) each. There will be a practical and an oral test carrying 200 marks.

Standard of Passing :

R. 32-C: To pass the examination the candidates shall obtain in each subject 50 per cent of the full marks in clinical, practical and oral tests together and 50 per cent of the full marks in the written test.

SECOND M.B.B.S. COURSE.

Admission :

O. 172: No candidate shall be admitted to the Second M.B.B.S. Examination unless he has passed the First M.B.B.S. Examination and has been engaged in medical studies at a Medical College affiliated to this University, for a period of three academic terms after passing that examination.

Subjects of the Examination :

R. 33: Candidates shall be examined in the following subjects:

- (i) Pharmacology, including Pharmaco-therapeutics.
- (ii) Pathology and Bacteriology.
- (iii) Forensic Medicine and Toxicology.

There shall be one Paper, a practical test and an oral examination in each of the above subjects—(i) to (iii). Each paper shall carry 100 marks and each practical and oral test carry 100 marks.

Standard of Passing :

R. 33-B: To pass the Examination, the candidates shall obtain 50 per cent of the full marks in the practical and oral tests together and 50 per cent of the full marks in the written test.

THIRD M.B.B.S. EXAMINATION.

Admission :

O. 173: No candidate shall be admitted to the Third M.B.B.S. Examination unless he has passed the Second M.B.B.S. Examination and shall have been engaged in medical studies at a medical college recognised by the Karnatak University for at least one clear term after passing the Second M.B.B.S. Examination and for at least three years after passing the First M.B.B.S. Examination.

Subjects of the Examination :

R. 34: The candidates will be examined in the following subjects :

- (i) Medicine, including preventive and Social Medicine and Therapeutics and Applied Pathology.
- (ii) Surgery, including E. N. and T. and Ophthalmology and Applied Pathology.
- (iii) Midwifery and Gynaecology and Applied Pathology.

Standard of Passing :

R. 34-B: To pass the examination, the candidates shall obtain in each subject 50 per cent of the full marks in the clinical, practical and oral tests taken together and 50 per cent of the full marks in the written test. But they shall not be declared to have passed the whole examination until they have passed in all the subjects of the examination.

EXAMINATIONS BY RESEARCH FOR DOCTORATES IN
THE VARIOUS FACULTIES(1) *Degree of Doctor of Philosophy (Ph.D.)*

O. 174: The degree of Doctor of Philosophy may, subject to the conditions mentioned below, be conferred upon:

- (a) Graduates in the Faculties of Arts, Social Sciences, or Science or Technology of this University or of any other University recognised by this University, and Graduates in Medicine and Surgery of this University who have carried on research in Anatomy, Bacteriology, Pathology, Pharmacology, or Physiology.
- (b) Masters in the Faculties of Arts or Social Sciences or Science or Technology of this University or of any other University recognised by this University.

O. 174-A: A candidate for the Degree of Ph. D., must have worked for the necessary period under the guidance of a University Teacher. For Bachelors in the Faculties of Arts, Social Sciences, Science, Medicine, Agriculture or Engineering, this period shall be three academic or calendar years and for Masters in Arts, Social Sciences, Science or

Technology one academic or calendar year, if the Master's degree has been obtained wholly by research; or two academic or calendar years if wholly or partly obtained by papers in the same subject, or wholly or partly obtained by papers in the same subject, or wholly by research in another subject. The term "academic year" applies to candidates who register within one calendar month of the first day of any academic year and that of 'calendar' to candidates who register at any other time. Admission to the qualifying degree shall be a condition precedent.

O. 174 B: A candidate for the Ph D. Degree in Mathematics, Geography, Physics, Chemistry, Botany, Zoology, Agriculture, Geology, Anatomy, Embryology, Bacteriology, Pathology, Pharmacology or Physiology shall first pass the language test prescribed for the Ph.D. Examination in that subject, or an examination in French or German of another University recognised as equivalent to the Language Test prescribed for the Ph.D. examination of this University at least two terms or one calendar year in all subjects prior to presenting his thesis for the Ph.D.

O. 174 C: No candidate shall be permitted to appear for the Ph.D. Degree in a Faculty different from the one in which he has obtained his Bachelor's or Master's Degree, provided however, that a graduate in the Faculty of Medicine shall be permitted to appear for the Ph.D., Degree in the subjects of (i) Animal Physiology (ii) Cytology and (iii) Microbiology and a graduate in the Faculty of Science shall be permitted to appear for the said Degree in the subject of Bacteriology and Pharmacology and a graduate in the Faculty of Arts who has taken his Bachelor's or Master's degree in Mathematics shall be permitted to appear for the Ph.D. degree in Science in the subject of Mathematical Physics.

O. 174 D: No candidate shall be registered for a Master's Degree and Ph.D., simultaneously provided always that a candidate who is registered for a Master's degree by research may be permitted on the recommendation of the University teacher guiding his studies, notwithstanding the fact that the teacher may be a recognised teacher for Master's degree only to submit a thesis for the Ph.D. Degree not less than three academic or calendar years from the date of his registration for the Master's degree in the case of Bachelors in the Faculty of Arts, Social Sciences, Science, Medicine, Agriculture or Engineering and in case of Bachelors of Science (Tech.) not less than two academic or calendar years from such registration. Such candidate shall pay the difference between the registration fee for the Ph.D. Degree and that for the Master's degree and shall register his name under a teacher recognised for the Ph.D. degree in the subject, if the teacher under whom he was previously working for the Master's degree was not a recognised teacher for the Ph.D. Degree. A candidate who has submitted his thesis for the Master's degree shall be permitted to register his name as a candidate for

the Ph. D. degree provided that such registration shall have effect only if the Master's degree is conferred on him before he submits his thesis for the Ph. D. Degree.

O. 174-E: A candidate will not be permitted to submit as his thesis, a thesis for which a Degree has been conferred on him in this or in any other University; but a candidate shall not be precluded from incorporating work which he has already submitted for a Degree in this or in any other University in a thesis covering wider field, provided that he shall indicate in a written statement accompanying the thesis any work which has been so incorporated.

O. 174 F: Each candidate for the Degree shall send three type-written or printed copies of his thesis embodying the results of his research and stating whether the work is based on the discovery of new facts by the candidate or of new relations of facts observed by others, and how the work tends to the advancement of knowledge. The candidate shall further forward a statement indicating the sources from which his information has been derived and the extent to which he has based his work on the work of others, and shall indicate which portion or portions of his thesis he claims as original. Where a candidate presents a joint work, he shall clearly state the portion which is his own contribution as distinguished from the portion contributed by his collaborator. This statement shall be certified as correct by the University teacher as well as the candidate. The candidate may also forward with his application three copies of any original contribution or contributions to the advancement of knowledge on the subject selected by him for his thesis or any cognate subject published by him independently or jointly with others upon which he relies in support of his candidature. The thesis shall be written or printed in English, save that when the subject-matter of the thesis relates to a Modern European or Modern Indian Language, it may, with the previous permission of the Board of University Teaching be written or printed in that Language.

N.B.—For the purpose of the above Ordinance, 'Modern Indian Language' shall include Kannada, Telugu, Tamil, Malayalam, Marathi, Hindi and Urdu, and 'Modern European Language' shall include French, German, Portuguese and Russian.

O. 174 G: Two months before submitting the thesis, the candidate shall forward to the Registrar through his University Professor or University Teacher two copies of the statement giving the title and synopsis of the thesis along with a fee of Rs. 100/-. Thesis may be submitted any time during the year.

O. 174 H: The Academic Council having before it the suggestion or suggestions of the appropriate Board of Studies shall recommend to the Syndicate the names of two referees, one of whom shall be the University Teacher who has guided the candidate's work. When the Syndi-

cate have appointed the referees, the Registrar shall forward the thesis to them. The referees shall report to the Syndicate whether the thesis shall be accepted or rejected, and their report shall be final. In the event of a difference of opinion between the referees, the Syndicate shall appoint a third referee and the Syndicate shall decide, after considering the reports of all the three referees, whether the Degree shall be conferred. All reports shall be circulated to the members of the relevant Board of Studies and placed before the Academic Council for information.

O. 174 I: The degree of Ph.D. shall not be conferred as an *ad eundem* Degree.

O. 174 J: A work that has been rejected may be re-submitted after due revision and subject to the payment of half the original fee.

O. 174 K: Save in the case of candidates for the Ph.D. Degree in Medicine, presenting thesis in the subjects of Bacteriology, Pathology and Pharmacology, the lower Master's Degree may be conferred on a candidate for the Ph.D. Degree in the Faculties of Arts, Social Sciences, Science or Technology, whose work, in the opinion of the referees, is not worthy of the Degree of Ph.D., but is a sufficient degree of merit to justify the award of such lower Master's Degree, provided the candidate does not already hold a Master's Degree.

Nothing in this Ordinance shall be deemed to permit a candidate who has been registered for the Ph.D. Degree to submit a thesis for the lower Master's Degree.

(ii) *Degree of Doctor of Letters (D.Litt.)*

O. 175: The Degree of Doctor of Letters may be conferred upon Bachelors of Arts, Masters of Arts and Doctors of Philosophy (Arts) of this University and upon teachers in the colleges affiliated to this University who hold the Master's or Doctor's degree in Arts of any other University which is recognised as equivalent to the Master's or Doctor's Degree of this University and who have previous teaching experience in a college affiliated to this University, extending over a period of at least seven years, for published work which has been undertaken mainly on the candidate's own initiative, which may be deemed by competent judges to be valuable contributions to learning.

O. 175 A: A candidate for this Degree must have at least two year's standing as a Doctor of Philosophy (Arts) or three year's standing as a Master or seven year's standing as a Bachelor.

O. 175 B: A candidate for this Degree may apply to the Registrar at any time in the year to be admitted to the Degree. The application shall be accompanied by four copies of the published work on the merits of which the Degree is sought.

R. 35: The candidate shall also submit a signed statement showing in what particulars his work advances knowledge on the subject of his research and indicating the nature and extent of any guidance or advice or advice that he may have received from any one during the progress of his research. The candidate may support his application by giving proof, at the same time, of having done other original work.

O. 175 C: A candidate shall pay a fee of Rs. 200/- at the time of making his application.

O. 175 D: The Registrar shall place all the papers and documents mentioned in Ordinance 175 B and Regulation 35 before the relevant Board or Boards of Studies, which, after due consideration, shall suggest to the Academic Council the names of referees, but in doing so they shall have a detailed statement of the grounds on which they hold this opinion. The Syndicate shall be at liberty to refuse to send to referees the work of such a candidate.

O. 175 E: The referees shall make a joint report to the Registrar for submission to the Academic Council stating whether they consider the work to be a valuable contribution to learning and deserving of the Degree. The Academic Council shall then send its recommendation thereon to the Syndicate.

O. 175 F: The Degree of D. Litt., shall not be conferred as an *ad eundem*

O. 175 G: A work that has been rejected may be resubmitted after due revision and subject to the provisions of Ordinances 175 B and 175 C.

(iii) *Degree of Doctor of Science (D.Sc.)*

O. 176: The Degree of Doctor of Science may be conferred—

- (a) upon graduates of Science, Science (Tech.), Engineering, Agriculture, upon Bachelors of Arts with Mathematics and Science, and Graduates in Medicine and Surgery of this University who have carried on research in Anatomy, Bacteriology, Pathology, Pharmacology or Physiology;
- (b) upon Masters of Science, Science (Tech.), Engineering and Agriculture and upon Masters of Arts with Mathematics or Science of this University;
- (c) upon Doctors of Philosophy of this University;
- (d) upon teachers in the colleges affiliated to this University who hold the Master's or Doctor's Degree in Science of any other University which is recognised as equivalent to the Master's or Doctor's Degree of this University, and who have previous teaching experience in a college affiliated to this University, extending over a period of at least seven years.

O. 176 A: The degree may be conferred, for published work, which was undertaken mainly on his own initiative and which is deemed by competent judges to be a valuable contribution to Science, upon a candidate who must have at least two years' standing as a Doctor of Philosophy or three years' as a Master, or six years' as a Bachelor.

O. 176 B: A candidate for this degree may apply to the Registrar at any time in the year to be admitted to the degree. A candidate shall submit with his application four copies of the published work.

A candidate will not be permitted to submit work for which a degree has been conferred upon him by this or any other University; but he shall not be precluded from producing such work in support of his application by way of proof that he has done other original scientific work which has received academic recognition either from this or any other University. The application shall clearly specify which of the published work has previously received recognition.

R. 36: The candidate shall indicate what has been done by other workers in the same subjects and what he claims as his own and shall indicate also the extent to which he has been advised or assisted during the work. He may support his application by giving proof of having done other original scientific work.

O. 176 C: A candidate shall pay a fee of Rs. 200/- at the time of making his application.

O. 176 D: The Registrar shall place the work and all the supplementary papers if any, before the relevant Board or Boards of Studies which, after due consideration, shall suggest to the Academic Council the names of three referees, if, in the opinion of the Board or Boards of Studies, the work submitted by a candidate is unworthy of being presented for the degree, the Board or Boards shall be at liberty to record their opinion accordingly, while suggesting names of referees, but in doing so they shall give a detailed statement of the ground on which they hold this opinion. The Syndicate shall be at liberty to refuse to send to referees the work of such a candidate.

O. 176 E: The Examiners shall make a joint report to the Registrar for submission to the Academic Council stating whether they consider the work to be a valuable contribution to learning and deserving of the degree. The Academic Council shall then send its recommendation thereon to the Syndicate.

O. 176 F: The Degree of Doctor of Science shall not be conferred as an *ad eundem* degree.

O. 176 G: A work that has been rejected may be re-submitted after due revision and subject to the provisions of Ordinances 176 B and 176 C.

STATEMENT SHOWING THE NUMBER OF STUDENTS WHO
APPEARED AND PASSED AT THE VARIOUS EXAMINA-
TIONS HELD DURING THE FIRST HALF OF 1955.

Examination	Appeared	Passed			
		First Class	Second Class	Pass	Total passed
Inter Arts	1158	—	106	536	642
B.A. (General)	32	—	10	15	25
B.A. (Special)	573	7	156	291	454
M.A.	44	—	15	22	37
T.D.	8	—	—	6	6
B.Ed.	113	5	51	43	99
M.Ed.	30	—	6	13	19
Inter Commerce.	121	—	7	87	94
B.Com.	94	1	7	42	50
Inter Science.	1104	65	323	261	649
B.Sc.	379	45	137	121	303
M.Sc.	65	7	21	14	42
Law Preliminary.	29	1	7	15	23
1st LL.B.	91	2	55	6	63
2nd LL.B.	136	—	68	14	82
F.E.	126	—	6	69	75
S.E. (Civil)	97	—	6	53	59
B.E. (Civil)	35	—	5	16	21
I.Sc. (Agri) 1st Year	73	—	—	—	42
I.Sc. (Agri) 2nd Year	51	—	—	—	26
S.Sc. (Agri)	26	—	—	—	20
B.Sc. (Agri)	27	—	4	18	22
First M.B.B.S.	48	—	—	—	35

UNIVERSITY OF KERALA

The University of Travancore, now reconstituted as the University of Kerala, was established under the Travancore University Act — Act 1 of 1113 Malayalam Era (1937), promulgated by His Highness Sir Bala Rama Varma, the then Maharaja of Travancore on 1st November, 1937. As stated in the preamble of the Travancore University Act, the chief aims of the University were :—

- (i) to effect a reorganisation of the system of education in the State with a view to the gradual development of technical and technological education ;
- (ii) to make greater and more systematic provision for the furtherance of original research in the various branches of Applied Science ; and
- (iii) to provide for the conservation and promotion of Kerala Art and Culture.

With the reorganisation of States and the formation of the new State of Kerala, it was found necessary to re-constitute the University of Travancore into a teaching and federal University for the whole of the State of Kerala in order to enable it to provide for the conservation, promotion and development of Kerala art and culture and the Malayalam language and for the gradual change of the medium of instruction into Malayalam in all the educational institutions of the State and to provide greater facilities for post-graduate study and original research in all branches of learning by establishing centres of post-graduate study and original research in different parts of the State. The Kerala University Act — Act 14 of 1957 — came into force on 30th August, 1957 and the University of Travancore was changed to the University of Kerala from that date.

CONSTITUTION

The Governor of the State of Kerala is the Chancellor of the University. The Pro-Chancellor of the University is the Minister administering the subject of Education in the State. The Vice-Chancellor is the principal academic and executive officer of the University and is appoint-

ed by the Chancellor on the unanimous recommendation of a special committee consisting of three members, one elected by the Senate, one elected by the Syndicate and the third nominated by the Chancellor and shall hold office for a period of three years.

The authorities of the University are: (i) The Senate, (ii) the Syndicate and (iii) the Faculties.

The Senate has the general superintendence over the affairs, concerns and properties of the University. It consists of *Ex-officio Members* like the Chancellor, Pro-Chancellor, Vice-Chancellor, Heads of University Departments of Study and Research, Deans of Faculties, Chief Justice of Kerala, Secretaries (Education and Finance) to Government, Director of Public Instruction, etc., *Elected Members* like the representatives of Registered Graduates, Legislature of the State, Teaching Staff of Colleges, Corporation of Trivandrum, Municipal Councillors and Panchayaths of the Revenue Districts, etc., *Life Members and Members nominated* by the Chancellor. The Senate is to be reconstituted every three years.

The Syndicate consisting of 16 members forms the executive body of the University and exercises general superintendence and control over the institutions of the University.

A Board of Finance and Accounts has been constituted to examine the Budget estimates and to advise the Syndicate on financial matters.

To advise the Senate and the Syndicate in all matters of an academic character, there are Faculties and Boards of Studies. At present there are 13 Faculties, viz., those of Arts, Science, Engineering, Technology, Oriental Studies, Fine Arts, Commerce, Medicine, Ayurveda, Law, Education, Agriculture and Veterinary Science. Boards of Studies have been set up for English (Pass, and Honours & Post-graduate), Philosophy (Pass, and Honours & Post-graduate), Psychology (Honours & Post-graduate), History (Pass, and Honours & Post-graduate), Politics (Pass, and Honours & Post-graduate), Economics (Pass, and Honours & Post-graduate); Islamic Studies, European Languages, Geography, Mathematics (Pass, and Honours & Post-graduate), Physics (Pass, and Honours & Post-graduate), Chemistry (Pass, and Honours & Post-graduate), Botany (Pass, and Honours & Post-graduate), Zoology (Pass, and Honours & Post-graduate), Statistics, Geology, Home Science, Malayalam (Pass, and Honours & Post-graduate), Sanskrit (Pass, and Honours & Post-graduate), Hindi (Pass, and Honours & Post-graduate), Tamil, Hebrew and Syriac, Music, Medicine, Nursing, Engineering, Textile Technology, Fisheries and Food Technology, Law (Pass, and Post-graduate), Education (Pass, and Post-graduate), Commerce, Ayurveda, Agriculture and Veterinary Science.

OFFICERS AND STATUTORY AUTHORITIES

Chancellor

Dr. B. Ramakrishna Rao, B.A., LL.B., LL.D., Governor of Kerala.

Pro-Chancellor

Shri. Joseph Mundassery, M.A., Minister for Education and Co-operation.

Vice-Chancellor

Dr. John Matthai, B.A., B.L., B.Litt. (Oxon), D.Sc. (London).

Registrar

Shri. V. P. Kannan Nair, M.A., L.T.

DEANS OF FACULTIES

(as on 1-2-1958)

<i>Arts</i>	..	Shri V. M. Ittyerah, M.A., B.Litt., Principal, Mar Thoma College, Thiruvalla.
<i>Science</i>	..	Dr. C. S. Venkateswaran, M.A., D.Sc., F.Inst. P., Director of Collegiate Education, Trivandrum.
<i>Oriental Studies and Fine Arts</i>	..	Shri Malloor K. Govinda Pillai, B.A., B.L., (Retd. Law College Principal & Advocate) Trivandrum.
<i>Law</i>	..	The Hon'ble Chief Justice Mr. K. T. Koshi, B.A., B.L., High Court of Judicature, Ernakulam-1.
<i>Education</i>	..	Shri V. Sundararaj Naidu, M.A., B.L., Trivandrum.
<i>Technology</i>	..	Dr. M. V. Kesava Rao, B.Sc., Ph.D., A.I.I.Sc., Principal, College of Engineering, Trivandrum.
<i>Commerce</i>	..	Sri Kerala Varma, B.A., B.Com., G.D.A., R.A., Professor, Sacred Heart College, Thevara.
<i>Medicine</i>	..	Dr. T. K. Raman, M.D., D.T.M. (Cal.), Dean, Medical College, Trivandrum.
<i>Ayurveda</i>	..	Sri M. N. Kesava Pillai, B.A., A.M.S., Director of Indigenous Medicine, Trivandrum.
<i>Agriculture</i>	..	Sri M. C. Cherian, B.A., B.Sc., D.I.C., Principal, Agricultural College, Vellayani.
<i>Veterinary Science</i>	..	Dr. K. S. Nair, M.R.C.V.S., Principal, Veterinary College, Trichur.

CHAIRMEN OF BOARDS OF STUDIES

Subject	Pass Board	Honours & Post-graduate Board
<i>English</i>	.. Dr. A. Sivaramasubramonia Iyer, M.A., Ph.D.	Sri E. P. Narayana Pillai, M.A. (Oxon).
<i>Philosophy</i>	.. Sri K. Seshadri, M.A.	Dr. A. S. Narayana Pillai, M.A., M.Litt., Ph.D.
<i>Psychology</i>	..	Dr. E. I. George, M.A., Ph.D.
<i>History</i>	L .. Sri V. Ramanathan, M.A., L.T.	Sri P. S. Raghavan, M.A.
<i>Politics</i>	.. Sri V. Narayana Pillai, M.A., B.L.	Dr. V. K. Sukumaran Nair, M.A., Ph.D.
<i>Economics</i>	.. Sri W. Krishnakutty Menon, M.A.	Sri V. R. Pillai, M.A., M.Sc.
<i>Islamic Studies</i>	.. Moulavi Syed Abdul Wahab Bukhari Sahib, M.A., L.T.	
<i>European Languages</i>	.. Sri T. P. Thamby, B.A.	
<i>Geography</i>	.. Sri S. Muthukrishna Karayalar, B.A. (Hons.), (Geography) (London), L.T., F.R.G.S.	
<i>Mathematics</i>	.. Sri T. S. Venkataraman, M.A.	Sry. Annamma Varki, B.A. (Hons.)
<i>Physics</i>	.. Sry. Mary Poonen, B.A., B.Sc., A.R.C.S.	Dr. C. S. Venkateswaran, M.A., D.Sc., F. Inst. P.
<i>Chemistry</i>	.. Dr. P. P. Pillai, D.Sc., F.R.I.C., A.I.I.Sc.	Dr. A. Narayanan Potti, M.A., Ph.D.
<i>Botany</i>	.. Sri K. Narayana Iyer, M.A.	Sri A. Abraham, M.A., M.Sc., Ph.D.
<i>Zoology</i>	Sri K. J. Joseph, M.A.	Dr. K. Bhaskaran Nair, M.Sc., D.Sc.
<i>Statistics</i>	.. Sry. Aleyamma George, M.Sc.	
<i>Geology</i>	.. Sri K. K. Menon, M.S. (Yale).	
<i>Home Science</i>	.. Dr. N. Krishnan Tampi, M.B.B.S., B.S.Sc. Dr.P.M.	

Subject	Pass Board	Honours & Post-graduate Board
<i>Malayalam</i>	.. Sri K. R. Ramakrishnan, M.A., L.T.	Sri P. N. Kunjan Pillai, M.A.
<i>Sanskrit</i>	.. Dr. P. K. Narayana Pillai, M.A., Ph.D.	Sri N. Gopala Pillai, M.A.
<i>Hindi</i>	.. Dr. K. Bhaskaran Nair, M.A., Ph.D.	Sri A. Chandrasekhar, M.A.
<i>Tamil</i>	.. Sri R. P. Sethu Pillai, B.A., B.L.	
<i>Hebrew & Syriac</i>	.. Rev. Fr. Thomas William, B.A. (Hons.), L.T.	
<i>Music</i>	.. Sri P. Sambamurthy, B.A., B.L.	
<i>Medicine</i>	.. Dr. T. K. Raman, M.D.	
<i>Nursing</i>	.. Dr. K. Ponnammamma, M.D., D.G.O.	
<i>Engineering</i>	.. Dr. M. V. Kesava Rao, B.Sc., Ph.D.	
<i>Textile Technology</i>	.. Sri K. B. S. Rao.	
<i>Fisheries & Food Technology</i>	.. Sri S. Narasimhamoorthi Rao, M.Sc.	
<i>Law</i>	.. The Hon. Chief Justice Mr. K. T. Koshi, B.A., B.L.	The Hon'ble Chief Justice Mr. K. T. Koshi, B.A., B.L.
<i>Education</i>	.. Sri Korah M. Mani, B.A. (Hons.), L.T.	Sri P. S. Abraham, B.A., M.Ed. (Leeds) Dip. in Edn.
<i>Commerce</i>	.. Sri Kerala Varma, B.A., B.Com., G.D.A., F.C.A.	
<i>Agurveda</i>	.. Dr. A. Lakshminipathi, B.A., M.B.C.M.	
<i>Agriculture</i>	.. Sri M. C. Cherian, B.A., B.Sc., D.I.C.	
<i>Veterinary Science</i>	.. Dr. K. S. Nair, M.R.C.V.S., D.T.V.M. (Edin.)	

INSTITUTIONS MAINTAINED BY THE UNIVERSITY

1. *Research Institute, Trivandrum* : The Research Institute has been founded with the object of providing increased facilities for research in Applied Science.

The Institute now consists of the following Divisions :—

- (i) Department of Applied Chemistry ;
- (ii) Department of Marine Biology and Fisheries ;
- (iii) Department of Statistics ; and
three sections namely, Fresh Water and Estuarine Biology,
Mineral Survey and Research, and Pharmacognosy of Ayur-
vedic drugs.

The University has established a Marine Biological Laboratory and Aquarium for the promotion of Marine Biological research. The tanks of the Aquarium are the largest on the main land of Asia. It is proposed to establish an Institute of Oceanography at Cochin which is an ideal place for locating the Institute in view of its geographical position and its importance as a naval base and training centre.

A Council of Research consisting of Heads of Departments of Studies in Science and Technology in the University, Representatives of Government and of Industry has been constituted with Vice-Chancellor as Chairman to advise the University on the working of the Department of Research.

The Institute provides instruction for a two year M.Sc. Course in Statistics. Provision has been made for research leading to the degrees of M.Sc., Ph.D. and D.Sc.

Vice-Chairman, Council of Research :

Dr. C. C. John, M.A., D.Sc., D.I.C.

Professor of Marine Biology
and Fisheries :

Dr. C. C. John, M.A., D.Sc., D.I.C.

Professor of Applied Chemistry :

Dr. P. P. Pillai, D.Sc., F.R.I.C., A.I.I.Sc.

Professor of Statistics :

Smt. Aleyamma George, M.Sc.

2. *Post-Graduate College of Education* : Provides instruction for M.Ed. Course.

Professor Principal : Sri P. S. Abraham, M.Ed. (Leeds).

3. *Department of Psychology* : Provides instruction for Post-graduate course in Psychology.

Reader : Dr. E. I. George, M.A., Ph.D.

4. *Department of Politics* : Provides instruction for Post-graduate course in Politics.
Reader : Dr. V. K. Sukumaran Nair, M.A., Ph.D.
5. *Department of Tamil (Research)* : The Department started as a Research Institution affords facilities for students and Research Scholars of the University. The Department is run under the endowment Fund of Dr. R. M. Alagappa Chettiar.
Professor of Tamil : Sri V. I. Subramoniam, M.A.
6. *Department of Islamic History & Culture* : A Readership in Islamic History and Culture was instituted in the University College in 1940 under the Muslim Endowment Scheme on an Honorarium of Rs. 300 p.m. and is now continuing under the University.
Reader : Sri Syed Abdul Razack Bukhari, M.A.
7. *Department of Publications* : The Department of Publications is a special feature of the University. It has been started with the object of enriching the Malayalam language on up-to-date lines. The Department has undertaken the publication of a series of glossaries of Scientific and Technical terms, popular science books and translation from classics. The Department is also publishing original works, compilation, editions of classical works, etc.
Superintendent : Sri Mathew M. Kuzhiveli.
8. *Malayalam Lexicon* : The work of publishing a Malayalam Lexicon on similar lines to the Tamil Lexicon of the Madras University has been taken up by this University. The scheme consists of the preparation and publication of a comprehensive Malayalam Lexicon including all words written and spoken in all stages of development of the Malayalam Language. By now, more than three lakhs of words and usages from books and also from regional dialects have been collected.
Editor : Sri Sooranad P. N. Kunjan Pillai, M.A.
9. *The Journal of Indian History* : In March 1946, the University purchased the goodwill of the Journal of Indian History from Professor S. Krishnaswami Aiyangar and undertook the responsibility for the future publication of the Journal. The first issue of the Journal was published by the University in April 1947 and the subsequent issues published according to schedule.
Editor : Sri P. S. Raghavan, M.A.
10. *University Library* : The University Library was started in 1942 as a Central Reference Library for the students and staff of all Colleges, Research Scholars and Registered Graduates of the

University. Books for the Library are purchased on the recommendation of the Book Selection Committees constituted for the purpose. The Library has more than 1,200 members and more than 58,000 volumes at present.

Officer-in-Charge : Sri V. R. Pillai, M.A., M.Sc.

11. *Manuscripts Library* : The University Manuscripts Library was started in September 1938 with 1,300 codices collected by Pandit R. A. Sastri. Since then a large number of manuscripts have been acquired by purchase, gift or on loan.

The Library has two sections viz., the Publication Section and Library Section. Unpublished and rare old manuscripts are being published in the Sanskrit and Malayalam Journals under the auspices of the University. Research on Sanskrit and Malayalam works are being carried out in the Library.

Honorary Director : Sri. Sooranad P. N. Kunjan Pillai, M.A.

12. *Students' Employment & Advisory Bureau* : The chief work of the Bureau consists in the answering of inquiries from the students and the general public regarding various subjects like courses of study at other Universities both Indian and Foreign, conditions of admission to them, Scholarships and Fellowships available, Certificates, competitive examinations, passage and passport and prospects of employment both within and outside India. Qualified candidates were assisted in despatching their applications for admission to Foreign Universities. All items of information which are of general interest to the students are published by the Bureau in the leading dailies in the State.

Secretary : Sri E. P. Narayana Pillai, M.A. (Oxon).

13. *Department of Physical Education* : The Department of Physical education organizes athletic games, tournaments etc. and supervise sports and other activities in Colleges. The main activities of the Department comprise the following :—

- (i) The Inter-Collegiate Tournaments.
- (ii) The Inter-University Tournaments.
- (iii) The University Clubs in Cricket and Indigenous Exercises.
- (iv) Medical Examination of students.
- (v) Inspection of Students' Lodgings.
- (vi) The University Students' Hall.

There is also a Board of Physical Education.

Director : Sri V. G. Abraham, B.A., Dip. in Physical Education.

14. *National Cadet Corps*: With the formation of National Cadet Corps by the Government of India, the First Travancore Battalion N.C.C. was inaugurated in the University on 15th March, 1949 which consisted of two Companies (315 Cadets) from the different Colleges in Trivandrum and 10 Officers. The object of the National Cadet Corps is to give basic military training to College students with a view to instilling in them discipline, spirit of leadership and sense of responsibility and to mould their character on the right lines.

With the formation of the Kerala State, the First Travancore Battalion N.C.C. became the First Kerala Battalion N.C.C. During 1956-57, the following N.C.C. Units functioned :—

- (i) First Kerala Battalion, N.C.C., Trivandrum.
- (ii) First Kerala Independent Company N.C.C., Ernakulam.
- (iii) 16 Kerala Signal Section N.C.C., Trichur.
- (iv) 19 Kerala Medical Company N.C.C., Trivandrum.

COLLEGES AFFILIATED TO THE UNIVERSITY

Name of College

Name of Principal

I. ARTS AND SCIENCE COLLEGES

(i) *Government Colleges.*

- | | |
|---|---|
| 1. University College, Trivandrum .. | Dr. K. Bhaskaran Nair, M.Sc.,
D.Sc. |
| 2. College for Women, Trivandrum .. | Smt. B. Anandavalli Amma, M.A. |
| 3. Sanskrit College, Trivandrum .. | Dr. P. K. Narayana Pillai, M.A.,
Ph.D. |
| 4. University Intermediate College, Trivandrum .. | Sri Madhava Menon. |
| 5. Maharaja's College, Ernakulam .. | Sri T. Madhava Menon,
M.Sc. (Leeds) |
| 6. Government College, Chittur-Cochin .. | Sri N. P. Subramonia Iyer, M.A. |
| 7. Government Victoria College, Palghat .. | Sri K. G. Krishna Rao, M.A. |
| 8. Government Brennen College, Tellicherry .. | Sri E. Raghava Warriar, M.A., B.T. |
| 9. Government Arts College, Karsargode .. | Sri V. Gopalan Nair, M.A. |

*Name of College**Name of Principal**(ii) Colleges under private
managements.*

10. Union Christian College, Alwaye	.. Sri T. B. Thomas, M.Sc.
11. St. Berchmans' College, Changanacherry	.. Rev. Fr. P. C. Mathew, M.A.
12. C.M.S. College, Kottayam	.. Sri P. C. Joseph, M.A.
13. Sanatana Dharma College, Alleppey	.. Sri V. Ramanathan, M.A., L.T.
14. Mahatma Gandhi College, Trivandrum	.. Sri A. Venkitachalam Iyer, M.A.
15. Mar Ivanios College, Trivandrum	.. Rev. Fr. Francis Kalasserry, B.Sc. (Hons.)
16. Sree Narayana College, Quilon	.. Sri A. Rama Iyer, M.A.
17. N.S.S. Hindu College, Changanacherry	.. Sri G. Balakrishna Pillai, M.A., B.L.
18. N.S.S. College, Pandalam	.. Sri K. R. Narayana Iyer, M.Sc.
19. St. Thomas College, Palai	.. Rev. Fr. Joseph Kuriathadam, M.A.
20. Fatima Mata National College, Quilon	.. Rev. Fr. Mathew Kuttiath, M.A., L.T.
21. Mar Thoma College, Thiruvalla	.. Sri V. M. Ittyerah, M.A., B.Litt. (Oxon).
22. Catholicate College, Pathanamthitta	.. Sri K. M. Mathen Tharakan, M.A.
23. Nirmala College, Muvattupuzha	.. Rev. Fr. Thomas Nedumkalil, M.A., B.T.
24. St. Thomas College, Kozhencherry	.. Sri A. J. Cherian, M.A.
25. Sree Sankara College, Kalady	.. Sri V. R. Srinivasaraghavan, M.A.
26. Mar Athanasius College, Kothamangalam	.. Rev. V. M. Geevarghese, M.A.
27. Christ College, Irinjalakuda	.. Rev. Fr. A. Gabriel, M.A.
28. Guruvayurappan College, Kozhikode	.. Sri N. T. Madhavan Nambiar, M.A.
29. Malabar Christian College, Kozhikode	.. Dr. V. G. M. Pavamani, M.A., L.T., Ph.D.

<i>Name of College</i>	<i>Name of Principal</i>
30. Farook College, Feroke	.. Sri K. A. Jaleel, M.A.
31. St. Albert's College, Ernakulam	.. Rev. Fr. Xavier Kaniampurath, M.A.
32. St. Thomas College, Trichur	. Rev. Fr. J. Kallingal, M.A.
33. Sree Kerala Varma College, Trichur	.. Sri A. V. Akhileswara Iyer, B.A. (Hons.)
34. Sree Narayana College for Women, Quilon	.. Smt. E. K. Santha, M.A.
35. N.S.S. College for Women, Trivandrum	. Smt. M. K. Meenakshikutty, B.Sc. (Hons.)
36. Assumption College, Changancherry	.. Sr. Mary Xavier, B.A. (Hons.)
37. St. Joseph's College for Women, Alleppey	.. Mother Olive Rodrigues, B.A. (Hons.), T.D.
38. Bishop Chulaparambil Memorial College, Kottayam	.. Sr. M. Fidelis, M.A., B.T.
39. Providence Women's College, Kozhikode	.. Rev. Sr. M. Gabrielle, A.C., B.A., B.T.
40. Little Flower College, Guruvayoor	.. Sr. Mary Victoria, B.A., L.T.
41. St. Teresa's College, Ernakulam	.. Sr. M. Digna, B.A. (Hons.)
42. St. Mary's College, Trichur	.. Sr. Annunciata, B.Sc.

II. PROFESSIONAL COLLEGES / INSTITUTIONS

(i) *Government Colleges/ Institutions*

43. Law College, Trivandrum	.. Sri K. Narayanan, B.A., B.L.
44. Law College, Ernakulam	.. Sri V. N. Subramonia Iyer, M.A., M.L.
45. College of Engineering, Trivandrum	.. Dr. M. V. Kesava Rao, B.Sc., Ph.D.
46. Training College, Trivandrum	. Sri Korah M. Mani, B.A. (Hons.), L.T.
47. Government Training College, Trichur	.. Sri K. Ramavarma Raja, B.A. (Hons.), B.T., M.Ed., (Lecturer-in-charge).

<i>Name of College</i>	<i>Name of Principal</i>
48. Government Training College, .. Kozhikode	Kumari M. Varghese, M.A. (London), T.D.
49. Medical College, Trivandrum ..	Dr. R. K. K. Thampan, B.A., M.B.B.S., D.G.O., M.R.C.O.G., F.R.C.S. (Edin).
50. Ayurveda College, Trivandrum ∴	Dr. A. Lakshmipathi, B.A., M.B.C.M.
51. Medical College, Kozhikode .	Dr. K. N. Pisharoty, M.D., M.R.C.P., D.T.M.
52. Agricultural College, Vellayani, .. Nemom P.O., Trivandrum	Sri M. C. Cherian, B.A., B.Sc., D.I.C.
53. Veterinary College, Ollukara, .. Mannuthy, Trichur	Dr. K. S. Nair, M.R.C.V.S., D.T.V.M. (Edin).
54. Government Training College, .. Tellicherry	Sri C. P. K. Tharagan, B.A. (Hons.), L.T.

(ii) *Colleges/Institutions under
private managements.*

55. N.S.S. Training College, Chen- .. ganacherry	Sri M. Gopalan Nair, M.A., L.T.
56. Mar Theophilus Training Col- .. lege, Trivandrum	Sri T. Y. Harris, M.A., L.T.
57. St. Joseph's Training College, .. Mannanam	Rev. Fr. Thomas William, B.A. (Hons.), L.T.
58. St. Thomas Training College, .. Palai	Sri A. O. Joseph, M.A., L.T.
59. Titus II Teachers' College, .. Thiruvalla	Dr. Anjilvel V. Mathew, B.A., B.T. M.Ed., Ph.D.
60. N.S.S. Training College, Panda- ∴ lam ..	Sri C. Krishna Das, M.A., L.T.
61. Mount Carmel Training College, .. Kottayam ..	Sr. M. Cruci Fixa, B.A., L.T., M.Ed.
62. St. Joseph's Training College ∴ for Women, Ernakulam	Smt. Lily Kurien, M.A., B.T.

*Name of College**Name of Principal*

III. ORIENTAL LANGUAGE INSTITUTIONS

(iii) *Original Language Institutions*

- | | | |
|--|----|---|
| 63. Rouzathul Uloom Arabic Col-
lege, S. Malabar | .. | Sri Moulavi Abussabah Ahmedali,
M.A. |
| 64. Madeenathul Uloom Arabic Col-
lege, Feroke | .. | Sri M.C.C. Abdurahman Moulavi. |
| 65. Sullamussalam Arabic College,
Areacode | .. | Sri M. Sheik Mohammed Sahib. |
| 66. Mahajana Sanskrit College, Per-
dala, Nirchal, P. O., Via.
Kumbla, Kasarkode | .. | Sri K. Shama Bhat, M.A. |
| 67. Sahitya Deepika Sanskrit Col-
lege, Pavaratty, Trichur Dist. | .. | Sri P. T. Kuriyakku. |

NUMBER OF STUDENTS

The total number of students in the various Colleges under the University during the year 1957-58 was 30,865 while the total number for 1956-57 was 31,258. Of the 30,865 on the rolls 8,577 were women and 22,288 men.

A Statement showing the Colleges under the University and the strength of each institution.

Sl. No.	Name of institution	Strength		Total
		Men	Women	

I. ARTS AND SCIENCE COLLEGES

(i) *Government Colleges*

- | | | | | |
|---|----|-----|-------|-------|
| 1. University College, Trivandrum | .. | 341 | 188 | 1,529 |
| 2. College for Women, Trivandrum | .. | — | 1,349 | 1,349 |
| 3. Sanskrit College, Trivandrum | .. | 78 | 13 | 91 |
| 4. University Intermediate College,
Trivandrum | .. | 508 | — | 508 |
| 5. Maharaja's College, Ernakulam | .. | 974 | 450 | 1,424 |
| 6. Government College, Chittur-
Cochin | | 459 | 101 | 560 |

Sl. No.	Name of institution	Strength		Total
		Men	Women	
7.	Government Victoria College, Palghat ..	943	200	1,143
8.	Government Brennen College, Tellicherry ..	531	180	711
9.	Government Arts College, Kasargode ..	97	13	110
(ii) Colleges under private managements.				
10.	Union Christian College, Alwaye ..	629	261	890
11.	St. Berchmans' College, Chengannacherry ..	1,131	230	1,361
12.	C. M. S. College, Kottayam ..	685	245	930
13.	Sanatana Dharma College, Alleppey ..	676	152	828
14.	Mahatma Gandhi College, Trivandrum ..	866	39	905
15.	Mar Ivanios College, Trivandrum ..	913	—	913
16.	Sree Narayana College, Quilon ..	1,166	245	1,411
17.	N.S.S. Hindu College, Changanacherry ..	690	172	862
18.	N.S.S. College, Pandalam ..	709	238	947
19.	St. Thomas College, Palai ..	882	—	882
20.	Fatima Mata National College, Quilon ..	839	269	1,108
21.	Mar Thoma College, Thiruvalla ..	395	184	579
22.	Catholicate College, Pathanamthitta ..	383	130	513
23.	Nirmala College, Muvattupuzha ..	396	111	507
24.	St. Thomas College, Kozhencherry ..	251	121	372
25.	Sree Sankara College, Kalady ..	169	40	209
26.	Mar Athanasius College, Kothamangalam ..	83	28	111

Sl. No.	Name of institution	Strength		Total
		Men	Women	
27.	Christ College, Irinjalakuda ..	253	—	253
28.	Guruvayurappan College, Kozhikode ..	321	72	393
29.	Malabar Christian College, Kozhikode ..	501	56	557
30.	Farook College, Feroke ..	418	—	418
31.	St. Albert's College, Ernakulam ..	643	—	643
32.	St. Thomas College, Trichur ..	918	—	918
33.	Sree Kerala Varma College, Trichur ..	640	113	753
34.	Sree Narayana College for Women, Quilon ..	—	231	231
35.	N.S.S. College for Women, Trivandrum ..	—	143	143
36.	Assumption College, Changanacherry ..	—	333	333
37.	St. Joseph's College for Women, Alleppey ..	—	217	217
38.	Bishop Chulaparambil Memorial College, Kottayam ..	—	204	204
39.	Providence Women's College, Kozhikode ..	—	268	268
40.	Little Flower College, Guruvayoor. ..	—	120	120
41.	St. Teresa's College, Ernakulam ..	—	427	427
42.	St. Mary's College, Trichur ..	—	565	565

II. PROFESSIONAL COLLEGES / INSTITUTIONS

(i) Government Colleges

Institutions.

43.	Law College, Trivandrum ..	140	19	159
44.	Law College, Ernakulam	201	10	211
45.	College of Engineering, Trivandrum ..	320	—	320

Sl. No.	Name of institution	Strength		Total
		Men	Women	
46.	Training College, Trivandrum ..	136	56	192
47.	Government Training College, Trichur. ..	93	27	120
48.	Government Training College, Kozhikode ..	69	18	87
49.	Medical College, Trivandrum ..	362	129	491
50.	Ayurveda College, Trivandrum ..	177	36	213
51.	Medical College, Kozhikode ..	35	15	50
52.	Agricultural College, Vellayani, Nemom P. O., Trivandrum ..	197	4	201
53.	Veterinary College, Ollukara, Mannuthy, Trichur ..	210	6	216
54.	Government Training College, Tellicherry ..	60	30	90

(ii) *Colleges/Institutions
under private managements*

55.	N.S.S. Training College, Changanacherry ..	101	49	150
56.	Mar Theophilus Training College, Trivandrum ..	67	33	100
57.	St. Joseph's Training College, Mannanam ..	98	—	98
58.	St. Thomas Training College, Palai ..	86	11	97
59.	Titus II Teachers' College, Thiruvalla ..	77	23	100
60.	N.S.S. Training College, Pandalam ..	75	25	100
61.	Mount Carmel Training College, Kottayam ..	—	99	99
62.	St. Joseph's Training College for Women, Ernakulam ..	—	98	98

Sl. No.	Name of institution	Strength		Total
		Men	Women	
III. ORIENTAL LANGUAGE INSTITUTIONS				
(iii) Oriental Language Institutions				
63.	Rouzathul Uloom Arabic College. S. Malabar	..	84 —	54
64.	Madeenathul Uloom Arabic Col- lege, Feroke	..	101 37	138
65.	Sullamussalam Arabic College, Areacode	..	35 19	54
66.	Mahajana Sanskrit College, Per- dala, Nirchal, P. O., Via. Kumbla, Kasarkode	..	15 —	15
67.	Sahitya Deepika Sanskrit Col- lege, Pavaratty, Trichur Dist.	..	61 125	186
		..	22,288 8,577	30,865

WOMEN'S EDUCATION

The College for Women, Trivandrum, provides instruction for the Pre-University, B.A./B.Sc. (Two-year & Three-year) Degree Courses. The College is partly residential, accommodation for a limited number of students being provided in a building situated on the premises of the College. Besides there are 9 Colleges for Women viz., Sree Narayana College for Women, Quilon; N.S.S. College for Women, Trivandrum; Assumption College, Changanacherry; St. Joseph's College for Women, Alleppey; Bishop Chulaparambil Memorial College, Kottayam; Providence Women's College, Kozhikode; Little Flower College, Guruvayoor; St. Teresa's College, Ernakulam; and St. Mary's College, Trichur, providing instruction for the Pre-University and Degree Courses in Arts and Science and two Training Colleges for women viz., Mount Carmel Training College, Kottayam and St. Joseph's Training College for Women, Ernakulam under private managements.

BUDGET

The University is supported by the Kerala Government. Besides the examination and other miscellaneous fees, the main source of income is the contribution from Government.

The year 1956-57 opened with a fund balance of Rs. 75,62,372. The total receipts during the year under Government grant, fees and miscellaneous accounts including a grant of Rs. 2,25,000 from the University Grants Commission for the purchase of books and equipments for the development of Scientific Education and Research etc. of the University amounted to Rs. 62,04,495. The total expenditure during the year under the various heads came to Rs. 68,35,418. The closing balance for the year was Rs. 69,31,449.

UNIVERSITY ENDOWMENTS

Each College awards several scholarships and prizes on the basis of examination results and on the basis of poverty. Besides the endowments already in existence in the Colleges when the University was started, the University has received a number of the following new endowments for the award of medals, prizes, scholarships and lecture-ships :—

- (1) The Meenakshi Amma Medal, (2) The Monkompu Aundy Aiyar Gold Medal, (3) The Muttamma Muthunayagom Memorial Gold Medal, (4) The Rao Sahib Udarasiromani T. Padmanabha Rao Medal, (5) The Rao Sahib Udarasiromani T. Padmanabha Rao Scholarship, (6) The Kerala Varma Valia Koil Thampuran Gold Medal, (7) The Sachivottama Prize (Books), (8) The Patchu Aiyengar Prize (Books), (9) The Sachivottama Dr. Sir C. P. Ramaswami Aiyar Medal, (10) His Highness he Elaya Raja (Silver) Trophy, (11) The Andhra University Medal, (12) The Ananthasiva Aiyar Gold Medal, (13) His Highness the Prince Avittam Thirunal Gold Medal, (14) The Nagam Aiya Medal, (15) The Sachivottama Shastiabdapurthy Memorial Medal, (16) The Chandrasekharam Medal, (17) The Sachivottama Shashtiabdapurthy Memorial Prize, (18) The Professor N. Krishnaswamy Aiyar Memorial Medal, (19) The Mrs. Malloor Govinda Pillai Physical Culture Gold Medal, (20) The Sri Chitra Fine Arts Medal, (21) Her Highness the Maharani of Bikaner Prize, (22) H. H. Martanda Varma Elaya Raja Prize (Books), (23) F. A. C. T. Prize (Books), (24) Prakulam C. Padmanabha Pillai Memorial Law Prize. (25) Athilakshmi Ammal Gold Medal, (26) Rajyasevanirata K. G. Parameswaran Pillai Medal, (27) Prakkulam C. Padmanabha Pillai Memorial Medal, (28) Dr. V. Nagoji Rao Gold Medal, (29) Indian Mathematical Conference Prize (Books or Cash), (30) Sri Chitra Prize (Cash), (31) Maharani Setu Parvati Bayi Prize (Cash), (32) The Sachivottama Sir C. P. Ramaswami Aiyar Scholarships, (33) Sir C. P. Medal, (34) Meenakshi Bhaskar Memorial Scholarship, (35) Vincent Endowment Scholarships, (36) Her Highness The Princess Karthika Thirunal Prize, (37) The Parur Samuham

Scholarship, (38) The Alangad Samuham Scholarship, (39) A. M. Varki Memorial Cup (Silver Cup), (40) A. M. Varki Memorial Medal, (41) His Highness the Maharaja Travancore Thevaram Prize (Cash), (42) Sakham Row Public Library Free Membership Endowment, (43) The Rao Sahib Subramania Karayalar Lectureship, (44) The Karthika Thirunal Theatre Fund, (45) Miss Watts Memorial Endowment, (46) Muslim Endowment, (47) Dr. Ram Alagappa Chettiar Endowment, (48) The Indian Mathematical Conference Prize, (49) Cullen Law Prizes, (50) Sadasivan Pillai Law Prize, (51) The Amukutty Rajagopalachari Gold Medal, (52) The Amukutty Rajagopalachari Scholarship, (53) P. Sankuni Menon Dewan Peishkar Gold Medal, (54) Ross Gold Medal, (55) Ravi Varma Gold Medal, (56) Training College Shastiabdapurthi Medal, (57) P. Sakheram Rao Gold Medal, (58) R. S. Lepper Memorial Medal, (59) Justice Muthunayagam Memorial Prize, (60) K. P. Gopala Menon Prize for History, (61) The Kerala Samithi Prize, (62) The Mahakavi Ulloor Lectureship, (63) Tiruvalluvar Memorial Prize, (64) V. K. R. Menon Memorial Scholarships, (65) V. K. R. Memorial Trophy, (66) M. S. Menon Gold Medal, (67) The Aranmula M. K. Narayana Pillai Vaidyan Memorial Gold Medal, (68) The Malloor Govinda Pillai Gold Medal for Law, (69) V. S. Subramonia Iyer Medal, (70) S. Ramakrishna Iyer Memorial Medal, (71) V. Sivaramakrishna Iyer Memorial Medal, (72) The Panampilly Govinda Menon Gold Medal, (73) Dr. K. Godavarma Memorial Gold Medal and Prize, (74) The Bhadramma Memorial Gold Medal, (75) Dr. K. Ramakrishna Pillai Gold Medal, (76) The Professor P. Sundaram Pillai Memorial Gold Medal, (77) A. V. George Gold Medal, (78) R. Velayudhan Nair Gold Medal, (79) N. Chandrasekharan Nair Gold Medal, (80) T. K. Joseph Gold Medal, (81) Scholarship to commemorate the Silver Jubilee of the City Co-operative Stores.

PROVISION FOR RESEARCH

The encouragement of research, especially in the various branches of Applied Science, being one of the main objects of the University, several steps have been taken for the realisation of this aim.

Provision has been made in the laws of the University for the award of degrees for research. The M.Sc., M.Litt., Ph.D., D.Sc., and D.Litt., degrees are awarded to graduates of this or other recognised Universities on the results of research work carried out in an approved institution within or outside Travancore.

Research students are required to pay the following fees:—

Candidates working in Arts Departments Rs. 30 per annum.

Candidates working in Science Departments Rs. 45 per annum.

The University has instituted twenty Research Scholarships each of the value of Rs. 60 per mensem and four Research Fellowships each of the value of Rs. 90 per mensem.

The following Research Scholarships, Lectureship and Prizes have been endowed :—

(1) *The Maharaja Martanda Varma Prize* of the value of Rs. 300, awarded once in two years to a Travancorean for the best literary or historical work produced.

(2) *The Maharaja Martanda Varma Scholarships* (two) of the value of Rs. 30 per mensem each, tenable for two years, awarded to qualified Travancoreans engaged in research work on Kerala Art and Literature and Kerala History.

(3) *Her Highness the Maharani Setu Parvati Bayi Prize* of the value of Rs. 300 awarded once in two years to a Travancorean for the best scientific monograph dealing with the practical applications of scientific research to industry or agriculture in the State.

(4) *Her Highness the Maharani Setu Parvati Bayi Fellowship* of the value of Rs. 50 per mensem, tenable for one year, awarded to a qualified Travancorean engaged in scientific research with special reference to its application to the industries or agriculture of the State.

(5) *The Chitra Research Scholarship* of the value of Rs. 30 per mensem, for research work in Kerala History or Archaeology.

(6) *Her Highness the Maharani Setu Parvati Bayi Lectureship* in Forest Research. A lecturer on a remuneration of Rs. 500 to be appointed every alternate year to deliver a course of lectures on some subject in Forestry.

(7) *Kanan Devan Scholarships* (two) each of the value of Rs. 50 per mensem, tenable for two years, awarded to qualified Travancoreans engaged in research work in Agriculture.

(8) *Kanan Devan Fellowship* of the value of Rs. 70 per mensem, tenable for two years, awarded to qualified Travancoreans engaged in research work in Agriculture or other allied subjects.

(9) *Kanan Devan Prize* of the value of Rs. 1,000 awarded every year to a Travancorean for the best scientific monograph dealing with the practical applications of scientific research to Agriculture in the State.

(10) *The University College Physics Society Silver Jubilee Research Prize* of Rs. 90, awarded once in two years, for encouraging research work in Physics.

DEGREES, DIPLOMAS, ETC.

The University offers in Arts, the Degrees of B.A. (Pass and Honours), M.A., Ph.D., and D.Litt.; in Science, the Degrees of B.Sc. (Pass and Honours), M.Sc., Ph.D., and D.Sc. The professional Degrees are Bachelor of Teaching, Bachelor of Laws, Bachelor of Science (Engineering), Bachelor of Medicine and Surgery and Bachelor of Ayurvedic Medicine, Master of Education, Master of Laws and LL.D. There are also Diplomas in Ayurveda and Social Service. In Oriental Studies, the University confers the title of Sahityavisarada (in Malayalam), Vidvan (in Tamil), Vidvan (in Hindi), Afzal-ul-Ulema (in Arabic) and Vidvan (New Scheme) in Malayalam, Sanskrit, Tamil, Hindi and Kannada.

The Degrees of D.Sc., D.Litt., and LL.D., may be conferred as Honorary Degrees also.

COURSES OF STUDY

University Previous Examination :—The University Previous Course leads to the three-year degree courses in Arts, Science and Commerce or to the Pre-professional Courses. Admission to the course is open to those who have passed the S.S.L.C. Examination conducted by the Education Department of the State or any other examination accepted by the Syndicate as equivalent thereto.

The Course extends over one year. The subjects of study and scheme of examination are as follows:—

Part I :

(a) English

(b) Any one of the following Languages :

Malayalam, Tamil, Kannada, Hindi, Urdu, Sanskrit, Arabic, Syriac, Persian, Hebrew, French, German.

Part II :

(a) Social Studies.

(b) General Science.

The course in Social Studies enables the students to get a general idea of human progress and civilization and it includes the study of Indian History and Culture and Geography. The course in General Science consists of the study of Mathematics, Physics, Chemistry and Biology.

There will be ten papers on the whole distributed as follows:—

Part I :

(a) English—2 papers

(b) Second Language

—2 papers

} each of three hours' duration carrying
100 marks.

Part II :

- (a) Social Studies—2 papers each of 2 hours' duration carrying 100 marks.
- (b) General Science—4 papers each of 1½ hours' duration carrying 50 marks.

For the Pre-University Examination in Sanskrit, the courses of study in Part I (a) and (b) and Part II (a) are the same as those under Part I (a) and (b) and Part II (a) of the general course ; but Part II (b) is Sanskrit consisting of the study of prescribed Textbooks in Prose, Poetry, Drama and Poetics as well as of basic texts in Vyakarana and Nyaya.

The minimum marks for a pass are 40 per cent in each of the languages under Part I and 40 per cent of the total marks in Part II and not less than 35 per cent in each group of subjects viz., Social Studies and General Science.

Candidates who pass in both the Parts at the same Examination and who obtain not less than 60 per cent of the total marks will be placed in the First Class, those who obtain less than 60 per cent but not less than 50 per cent will be placed in the Second Class and all other successful candidates will be placed in the Third Class.

Details of marks are not made available to the candidates ; instead a Grade Certificate is issued to each candidate containing the symbolic representation of the grade obtained in each subject, and in the case of a candidate who passes or completes the whole examination the Class obtained.

*Bachelor of Arts (B.A.) (Three-year Course) :—*This Course extends over a period of three years after the University Previous Examination. The subjects of study and scheme of examination are as follows :—

Part I—English (3 papers of 3 hours' duration each)

Paper I—Poetry & Drama ; Paper II—Modern Prose ;
Paper III—General English.

Part II—Additional Language (3 papers of 3 hours' duration each)

Paper I—Poetry & Grammar ; Paper II—Prose ; Paper III
—Composition & Translation.

Any one of the following languages may be taken under this Part—Malayalam, Tamil, Sanskrit, Hindi, Syriac, French, Arabic, Urdu, Hebrew, Kannada.

Part III—General Science (3 papers of 2 hours each)

Any three of the following subjects, taking at least one from each group may be offered under this part.

Group A :

- (1) Astronomy & Astrophysics, (2) Statistics, (3) Physics,
(4) Chemistry.

Group B :

- (1) Botany, (2) Zoology, (3) Geology, (4) Anthropology, (5)
Physical Geography, (6) Psychology, (7) Home Science.

Part IV—Optional Subjects : (6 papers of 3 hours each)

The following groups are allowed :

Group (i) a—History : Main—(1) Indian History, (2) History of the world.

Subsidiary :—(1) Politics (2) Economics, (3) Constitutional History of England and of India from 1600, (4) Geography.

(Any two subjects to be chosen out of the 4)

Group (i) b — History : Main—(1) Islamic History, (2) Indian History.

Subsidiary :—The same as under Group (i) a.

Group (ii) Politics : Main—(1) Political Theory, (2) Political Organisation including the study of modern constitutions.

Subsidiary :—(1) Sociology, (2) Public Administration, (3) Economics, (4) World History (Modern Period).

(Any two subjects to be chosen out of the 4.)

Group (iii) Economics : Main—(1) Economics I (2) Economics II.

Subsidiary :—(1) Geography, (2) Politics, (3) History of the World (Modern Period), (4) Statistics.

(Any two subjects to be chosen out of the 4.)

Group (iv) Philosophy : Main—(1) Philosophy I, (2) Philosophy II.

Subsidiary :—(1) Politics, (2) Economics, (3) Social and Abnormal Psychology, (4) Sociology.

(Any two subjects to be chosen out of the 4.)

Group (v) (a) English Language & Literature.

(b) Malayalam Language & Literature.

(c) Sanskrit Language & Literature.

(d) Hindi Language & Literature.

(e) Tamil Language & Literature.

(f) Arabic Language & Literature.

Group (vi) Indian Music.

Group (vii) Home Science.

Group (viii) Sociology or Social Welfare.

There will be two University Examinations, the first at the end of the Second Year and the Final at the end of the Third Year. Papers I and II of Parts I and II and Papers I, and II III of Part III are to be taken at the end of the Second Year and the rest at the end of the Third Year.

Bachelor of Science (B.Sc.) (Three-year Course): The Course extends over a period of three years after the Pre-University Examination. The subjects of study and scheme of examination are as follows :—

Part I—English (The same as for B.A. three-year).

Part II—Additional Language (The same as for B.A. three-year).

Part III—Social Studies (2 papers of 2 hours each). Any two of the following subjects may be taken under this Part :

(1) Civics or Sociology, (2) Elements of Economics, (3) Indian Culture, (4) Elements of Psychology or Elements of Logic, (5) Geography.

Part IV—Optional Subjects Main 4 papers and 2 practicals (for subjects other than Mathematics) Subsidiary 2 papers and 1 Practical (for subjects other than Mathematics).

The following are the Groups under this Part :—Group (i) Mathematics ; (ii) Physics ; (iii) Chemistry ; (iv) Botany ; (v) Zoology ; (vi) Geology ; (vii) Home Science ; (viii) Statistics ; (ix) Geography.

There will be two University Examinations, the first at the end of the Second Year and the Final at the end of the third year. Papers I and II of Parts I, II and III are to be taken at the end of the second year and the rest at the end of the third year.

Bachelor of Arts (B.A.) (Three-year) in the Faculty of Oriental Studies: Admission to this course is open to candidates who have passed the University Previous Examination in Sanskrit of this University or any other examination accepted by the Syndicate as equivalent thereto.

The course extends over a period of three years and consists of four parts :—

Part I — English (The same as for B.A. under the Faculty of Arts)

Part II — Additional Language (The same as for B.A. under the Faculty of Arts with the exception of Sanskrit)

Part III — General Science (The same as for B.A. under the Faculty of Arts)

Part IV — Sanskrit comprising the study of :—

General — (1) History of Sanskrit Language & Literature.

(2) Nyaya, Vyakarana & Alankara.

Special — Any one of the following subjects:

(a) Nyaya, (b) Vyakarana

(c) Sahitya (d) Jyotisa

(e) Vedanta.

Bachelor of Commerce (B.Com.) (Three-year) :—The Course is open to candidates who have passed the University Previous Examination of this University or any other examination accepted by the Syndicate as equivalent thereto and extends over a period of three academic years.

The course of study and scheme of examination are as follows :—

Part I — English (3 papers each of 3 hours' duration carrying 100 marks)

Paper I — English Prose.

Paper II — English Composition.

Paper III — Precis Writing and Business Correspondence.

Part II — Modern Language (one paper of 3 hours' duration carrying 100 marks) Any one of the following languages may be offered under this part :— Malayalam, Tamil, Hindi, Telugu, Kannada, Gujarathi, Marathi, Urdu, Arabic, French, German.

The language under this part shall not be the mother tongue or the regional language of the candidate.

Part III — Group A — Economics ;

Group B — Commerce ;

Group C — Elective Subject. Any one of the following subjects may be selected under this group: (1) Rural Economics & Co-operation; (2) Trade and Transport; (3) Insurance; (4) Statistical Methods and Their Application to Commerce; (5) Income tax Law & Practice; (6) Industrial Organisation & Cost Accounts; (7) Actuarial Science; (8) Advanced Currency & Banking (9) Special Accounts & Audit.

There are 10 papers in all under this part — three for Group A, four for Group B, and two for Group C.

There will be two University Examinations, one at the end of the Second year covering Part I and II subjects and the other at the end of the third year covering Part III subjects.

All the papers are of three hours' duration carrying 100 marks each.

The minimum for pass is 35 per cent in Parts I, II and in each group of Part III separately and 40 per cent in the aggregate in Groups B and C taken together. Successful candidates getting not less than 60 per cent of the marks in any part will be placed in the First Class, those who obtain less than 60 and not less than 50 per cent in the Second Class and all other successful candidates in the Third Class.

Pre-professional Examinations

The Pre-professional course extends over one academic year after the Pre-university Examination and leads to the professional courses in Engineering, Medicine, Ayurveda, Agriculture and Veterinary Science.

The Pre-professional courses in Medicine, Ayurveda, Agriculture and Veterinary Science are common and comprise the study of the following:—

Part I — English.

Part II — Physics, Chemistry and Biology.

The Pre-professional course in Engineering comprises the study of —

Part I — English.

Part II — Mathematics, Drawing, Physics & Chemistry.

The scheme of examination is as follows:—

Part I — English (2 papers of 2½ hours' duration carrying 100 marks each).

Part II — *For Engineering* —

Group A — Mathematics (2 papers of 2½ hours duration carrying 100 marks each)
Drawing (one 3 hour paper carrying 75 marks)

Group B — Physics	}	(2 written papers 2 hours duration carrying 75 marks each and one practical of 2 hours duration carrying 50 marks for each of the groups)
Group C — Chemistry		

Group D — Sessional work —	}	Drawing	.. 50
		Physics laboratory	.. 50
		Chemistry -do-	.. 50
		Mid-sessional Examination	
		Conduct, attendance, etc.	50

For other Subjects —

Group A — Physics	}	(2 written papers of 2 hrs. duration carrying 75 marks each and one practical of 2 hours duration carrying 50 marks for each of the groups)
Group B — Chemistry		
Group C — Biology		
Group D — Sessional Work	}	Physics laboratory .. 50
		Chemistry -do- .. 50
		Biology -do- .. 50
		Mid-sessional Examination, conduct, attendance etc. 50

No details of marks will be made available to the candidates, but a symbolic representation of the grade of attainment in each subject and the Class obtained in the whole examination will be indicated in the grade certificate that will be issued to the candidates.

* *Intermediate Examination in Arts and Science* — The Intermediate course forms part of and leads to the courses for the Degree and only those who are holders of the English School Leaving Certificate issued by the Director of Public Instruction and declared eligible for admission to a course of study in this University or have passed an examination recognized by the Syndicate as equivalent to it, are admitted to the course.

The course extends over two years. The subjects of study and scheme of examination are as follows :—

Part I — English (Prose, Poetry and Composition)

Part II — A Second Language.

One of the following languages may be offered :

(a) Classical : Sanskrit, Arabic, Syriac, Latin, Persian, Hebrew.

(b) Modern.

(i) European :—French, (ii) Indian :—Urdu, Tamil, Hindi, Malayalam.

Part III—Three subjects to be selected out of list A, list B or any of the groups included in list C :—

List A.—World History, British History, Indian History, History of Greece and Rome, Outlines of Islamic History from 632 to 1258, Civics, Logic, Elements of Psychology, Geography, Music, Elements of Economics.

For candidates choosing History, World History is compulsory.

* The course has been abolished but the examination continues for failed candidates.

List B.—Mathematics, Physics, Chemistry, Biology, Geography.

List C.—(i) Mathematics, Physics and Logic or Elements of Psychology, (ii) Mathematics, Physics and Music, (iii) Biology, Chemistry and Logic or Elements of Psychology, (iv) Biology, Chemistry and Music, (v) Biology, Chemistry and Economics (vi) Biology Chemistry and History, (vii) Biology, Chemistry and Agriculture (viii) Mathematics, Elements of Commerce. Accountancy and Logic.

There will be three papers in English, two papers in the Second Language and two papers in each of the subjects offered under Part III.

A candidate shall be declared to have passed the Intermediate Examination if he appears for all the three Parts and obtains not less than 35 per cent of the marks in each part. (In Physics, Chemistry, Biology and Agriculture under part III, the candidate should obtain, in addition, a minimum of 30 per cent of the marks for the *written* examination.) Candidates who pass in all the Parts at the same examination and who obtain not less than 50 per cent of the total marks shall be placed in the First Class; all the other successful candidates shall be placed in the Second Class. Candidates who pass in all the parts at the same examination and obtain not less than 60 per cent of the marks in any subject shall be declared to have gained Distinction in that subject. Candidates who pass the whole examination by passing in the several parts at separate examinations shall be placed in the Third Class.

Bachelor of Arts (B.A.).—The course of study extends over a period of two years after the Intermediate Examination. The subjects of study and scheme of examination are as follows :—

Part I—English—Shakespeare, Modern Poetry, Modern Prose, General English (4 papers).

Part II—Second Language—(2 papers) one of the following :—

(a) Classical : Sanskrit, Arabic, Syriac, Persian.

(b) Modern : (i) European : French, German ; (ii) Indian : Malayalam, Tamil, Hindi, Urdu.

Part III—Optional subjects. One of the following groups :

Group (i-a) Philosophy (5 papers) **(i-b)** Philosophy (5 papers), **(ii-a)** History and Economics (5 papers), **(ii-b)** Economics and History (5 papers), **(ii-c)** History, Economics and Islamic History and Culture (5 papers), **(ii-d)** Politics (5 papers), **(iii-a)** Sanskrit and Early Indian History (6 papers), **(iii-b)** Malayalam or Tamil with Sanskrit or Early South Indian History (6 papers), **(iii-c)** Hindi with Sanskrit or Malayalam or Tamil or Indian History — Muslim period (6 papers), **(iv)** Music, Economics and Politics or Veena (6 papers).

The minimum for a pass is 35 per cent in Part I, 35 per cent in Part II and in Part III, 30 per cent in each division of the optional group and 35 per cent, of the total. Successful candidates getting not less than 60 per cent are placed in the First Class, those obtaining not less than 50 per cent are placed in the Second Class and those obtaining less than 50 per cent are placed in the Third Class. Provision has also been made by which Bachelors of Arts may qualify in a different optional group or different second language. Such candidates are required to undergo a course of one year in a College in the new subject selected.

Bachelor of Arts (Honours)—B.A. (Hons.)—The course extends over a period of three years after the Intermediate examination. A candidate for Honours is required to pass a Preliminary examination in English, in (i) General English and (ii) Nineteenth Century Prose. In the case of candidates who have selected Branch III (English Language and Literature), the Preliminary examination will be in (i) Composition as above and (ii) The History of England treated in relation to the History of the English Language and Literature. The subjects of study for the Final examination are as follows:—Branch I—Philosophy (8 papers). Branch II—History (7 papers) Branch III—Economics (8 papers), Branch IV—Politics (8 papers) Branch V—English Language and Literature (9 papers), Branch VI—Sanskrit Language and Literature (9 papers), Branch VII—Malayalam Language and Literature (9 papers), Branch VIII—Tamil Language and Literature (9 papers).

In addition to the papers mentioned above, there is a *viva voce* test.

No candidate will be permitted to undergo the complete Final examination more than once. The minimum for a pass is 40 per cent of the total marks and not less than 30 per cent in each division of the examination. Successful candidates getting not less than 60 per cent are placed in the First Class, those getting not less than 50 per cent are placed in the Second Class and rest are placed in the Third Class. Those who fail in the B.A. (Hons.) examination but have obtained 33-1/3 per cent of the total and at least 25 per cent in each division of the examination are recommended for the B.A. Degree.

Master of Arts (M.A.)—A candidate who has passed the B.A., or B.Sc., Degree examination of this University or some other equivalent examination will be permitted to appear for the M.A. Degree examination after he has undergone the prescribed course of study for a period of not less than two years in a College. The courses of study, syllabuses, subjects for the examination, schemes of examination and time-table for the M.A. Degree examination are the same in all Branches as for the Final examination for the B.A. (Hons.) Degree, in the subjects in the corresponding Branch.

M.A. Courses in Politics, and Psychology also have been started in the University from the academic year 1957-58.

Bachelor of Science (B.Sc.).—The course of study extends over two years after the Intermediate examination. The subjects of study and the scheme of examination are:—Part I—English, Part II—Second Language and Part III—Optional subjects.

The courses of study for Parts I and II are the same as those prescribed for the B.A. Degree examination.

Part III—Optional Subjects.—One of the following groups of subjects may be taken at the option of the candidate subject to the proviso that the subject or subjects so offered shall except in the case of Geology and Home Science be from the subjects under Part III of the Intermediate Examination in which the candidate is declared as passed:—

Main	Subsidiary
(i-a) Mathematics	
(i-b) Mathematics	.. Physics
(ii-a) Physics	.. Mathematics
(ii-b) Physics	.. Chemistry
(iii-a) Chemistry	.. Physics
(iii-b) Chemistry	.. Botany
(iii-c) Chemistry	.. Zoology
(iv-a) Botany	.. Chemistry
(iv-b) Botany	.. Zoology
(v-a) Zoology	.. Chemistry
(v-b) Zoology	.. Botany
(vi-a) Geology	.. Physics
(vi-b) Geology	.. Chemistry
(vii) Agriculture	
(viii) Home Science	

The examination in the subsidiary subject will be of a less advanced character than that in the same subject of the main standard.

The scheme of examination is as follows:—

Groups:—

- (i-a) Mathematics, 6 papers.
- (i-b) Mathematics, Main, 4 papers ; Physics Subsidiary, 2 papers and a practical examination.
- (ii-a) Physics Main, 4 papers and 2 practical examinations ; Mathematics Subsidiary, 2 papers.
- (ii-b) Physics Main, 4 papers and 2 practical examinations ; Chemistry Subsidiary, 2 papers and a practical examination.
- (iii-a) Chemistry Main, 3 papers and 2 practical examinations ; Physics Subsidiary, 2 papers and a practical examination.

- (iii-b) Chemistry Main, 3 papers and 2 practical examinations; Botany Subsidiary, 2 papers and a practical examination.
- (iii-c) Chemistry Main, 3 papers and 2 practical examinations, Zoology Subsidiary, 2 papers and a practical examination.
- (iv-a) Botany Main, 2 papers and 2 practical examinations; Chemistry Subsidiary, 2 papers and a practical examination.
- (iv-b) Botany Main, 2 papers and 2 practical examinations; Zoology Subsidiary, 2 papers and a practical examination.
- (v-a) Zoology Main, 2 papers and 2 practical examinations; Chemistry Subsidiary, 2 papers and a practical examination.
- (v-b) Zoology Main, 2 papers and 2 practical examinations; Botany Subsidiary, 2 papers and a practical examination.
- (vi-a) Geology Main, 2 papers and a practical examination of two papers; Physics Subsidiary, 2 papers and a practical examination.
- (vi-b) Geology Main, 2 papers and a practical examination of two papers; Chemistry Subsidiary, 2 papers and a practical examination.
- (vii) Agriculture, 4 papers, 3 practical examinations and a *viva voce* test.
- (viii) Home Science, 6 papers and a practical examination of 4 papers.

The minimum for a pass is 35 per cent in Part I, 35 per cent in Part II and in Part III, 30 per cent in each divisions of the optional groups and 35 per cent of the total. Successful candidates getting not less than 60 per cent are placed in the First Class, those obtaining not less than 50 per cent are placed in the Second Class, and those obtaining less than 50 per cent are placed in the Third Class. Provision has also been made by which Bachelors of Science may qualify in a different optional group. Such candidates are required to undergo a course of one year in a college in the new subject selected.

Bachelor of Science (Honours)—B.Sc. (Hons.)—The course extends over a period of 3 years after the Intermediate examination. A candidate for Honours is required to pass a Preliminary examination in English, 2 papers (General English and Nineteenth Century Prose). The subjects of study for the Final examination are as follows :—

In all Branches other than Branch I—Mathematics—candidates are required to offer one of the following as the main subject and another of these or Mathematics as the Subsidiary subject:—1. Physics, 2. Chemistry, 3. Botany, 4. Zoology.

The examination in the Subsidiary subject consists of two papers and a practical examination.

Branch I—Mathematics.—There will be 8 papers, each of 3 hours' duration; 3 papers are set in Pure Mathematics, 3 in Applied Mathematics and one in each of the two optional subjects selected.

Branch II—Physics.—There will be 6 theory papers, each of 3 hours' duration and 4 practicals, each of 3 hours' duration. Marks are also allotted for laboratory note books.

Branch III—Chemistry.—The examination in the main subject consists of 5 theory papers, each of 3 hours' duration and 4 practicals each of 6 hours' duration. Marks are also allotted for laboratory note books.

Branch IV—Botany.—The examination in the main subject consists of 5 theory papers, each of 3 hours' duration and 4 practicals each of 3 hours' duration. Marks are also allotted for laboratory note books and plant collections.

Branch V—Zoology.—The examination in the main subject consists of 5 theory papers, each of 3 hours' duration and one paper of 3 hours' duration in the special subject chosen. There are 3 practicals, each of 3 hours' duration in the main subject and one of two hours' duration in the special subject. Marks are also allotted for laboratory note books and microslides.

No candidate will be permitted to undergo the complete Final examination more than once. The minimum for a pass is 40 per cent of the total marks and not less than 30 per cent in each division of the examination. Successful candidates getting not less than 60 per cent are placed in the First Class, those getting not less than 50 per cent are placed in the Second Class and the rest are placed in the Third Class. Those who fail in the B.Sc. Honours examination but have obtained $32\frac{1}{2}$ per cent of the total and at least 25 per cent in each division of the examination are recommended for the B.Sc. Degree.

Master of Science (M.Sc.)—A candidate who has passed the B.Sc. Degree examination of this University or some other equivalent examination will be permitted to appear for the M.Sc. Degree examination after he has undergone the prescribed course of study for a period of not less than two years in a College. The course of study, syllabuses, subjects for examination, schemes of examination and time-tables for the M.Sc. Degree examination shall be the same in all Branches as for the Final examination for the B.Sc. Honours Degree, in the Main subject in the corresponding Branch.

Master of Science (M.Sc.) in Statistics.—The course of study extends over two academic years. Admission to the course is open to

candidates who have passed the B.Sc. Degree Examination with any one of the following groups of optional subjects:—

- (i) Mathematics Main and Mathematics Subsidiary.
- (ii) Mathematics Main and Physics Subsidiary.
- (iii) Physics Main and Mathematics Subsidiary.

The examination consists of six written papers each of 3 hours' duration and two practical tests each of 4 hours' duration and a *viva voce*. Successful candidates getting not less than 60 per cent of the total marks are placed in the First Class, those getting not less than 50 per cent in the Second Class and those getting not less than 30 per cent in each paper and not less than 40 per cent of the grand total in the Third Class all other candidates shall be deemed to have failed in the examination.

M.Sc. IN APPLIED CHEMISTRY

Admission to the course is open to candidates who have passed the B.Sc. Degree examination of this University or some other equivalent examination with Chemistry as the Main subject and at least one of the following as Subsidiary subject:—

1. Physics 2. Botany and 3. Zoology

The course extends over a period of two years of which the first year is devoted mainly to a more advanced study of the two allied branches of Pure Chemistry viz. (a) Organic Chemistry and (b) Physical Chemistry. The second year is devoted to the study of one of the following special Applied subjects:—

- (i) Oils, Fats and Aromatics
- (ii) Pharmaceutical Chemistry

The M.Sc. Previous Examination consists of two papers and two practical examinations.

The M.Sc. Final Examination consists of written and practical examinations and a *viva voce* test.

Branch (i)—Oils, Fats and Aromatics, 3 papers, 2 practical examinations and a *viva voce* test.

Branch (ii)—Pharmaceutical Chemistry, 3 papers, 3 practical examinations and a *viva voce* test.

No candidate will be admitted to the M.Sc. Final Examination unless he has passed the M.Sc. Previous examination.

The minimum for a pass is 40 per cent of the grand total marks and not less than 30 per cent of the marks in each Division. Successful candidates getting not less than 60 per cent are placed in the First Class, those getting not less than 50 per cent are placed in the Second Class and the rest are placed in the Third Class.

**INTERMEDIATE EXAMINATION IN THE FACULTY OF
ORIENTAL STUDIES**

(*Sanskrit*)

Admission to the Intermediate course in Sanskrit is open to candidates who

are holders of Upadhyaya or Bhushana or Sastri or holders of equivalent titles who have passed the S.S.L.C. Examination of Travancore-Cochin or Madras, or Matriculation Examination of the Madras University

Or

have passed the new Sanskrit Entrance Examination

Or

have passed the new Sanskrit School Leaving Examination.

The course extends over a period of two years and consists of three parts.

Part I — English (Prose, Poetry and Composition).

Part II — A second language other than Sanskrit.

Part III — Sanskrit comprising the study of the following subjects :—

1. Vyakarana, Nyaya and Mimamsa
2. Vedic Texts, Upanishad and Dharmasastra,
and
3. Any one of the following special subjects
 - (a) Nyaya
 - (b) Vyakarana
 - (c) Sahitya
 - (d) Jyotisa
 - (e) Advaita Vedanta.

Candidates for the Intermediate examination in Sanskrit are required to answer the same question papers in Parts I and II as those set for the Intermediate Examination in Arts and Science. The examination in Part III consists of six papers (two papers in General subjects and four papers on the special subject chosen).

A candidate will be declared to have passed the Intermediate Examination in Sanskrit if he obtains not less than :

- (a) 35% of the Marks in Part I, English
- (b) 35% of the Marks in Part II, Second Language
- (c) 35% in each of the three groups under Part III.

All the other candidates shall be declared to have failed in the Examination.

Candidates who pass in all the Parts at the same Examination and who obtain not less than 50 per cent of the total marks will be placed in the First Class ; all other successful candidates shall be placed in the Second Class. Candidates who pass in all the Parts at the same examination and obtain not less than 60 per cent of the marks in any subject will be declared to have gained distinction in that subject. Candidates who pass in the whole examination by passing in the several Parts at separate examinations shall be placed in the Third Class.

BACHELOR OF ARTS (B.A.) IN THE FACULTY OF ORIENTAL STUDIES

(Two-Year Course)

Admission to the B.A. Degree Course in the Faculty of Oriental Studies is open to candidates who have passed the Intermediate Examination in Sanskrit of this University or an equivalent examination.

The course extends over a period of two years and consists of three Parts :

Part I — English

Part II — Second Language

Part III — Sanskrit comprising the study of the following subjects :—

1. Vedic Texts, Vyakarana, Nyaya and Mimamsa
2. History of Sanskrit Literature
3. History of Sanskrit Language and comparative Philology
4. Any one of the following special subjects :—
 - (a) Nyaya
 - (b) Vyakarana
 - (c) Sahitya
 - (d) Jyotisa
 - (e) Advaita Vedanta.

Candidates for the B.A. Degree Examination in Sanskrit are required to answer the same question papers in Parts I and II as those set for

the B.A. Degree Examination in the Faculty of Arts (2 years course) The examination in Part III consists of six papers, four papers in General subjects and four papers on the special subject chosen

A candidate will not be declared to have passed the B.A. Degree Examination in Sanskrit unless he has passed the examination in all the parts The minimum for a pass is 35 per cent in Part I, 35 per cent in Part II and in Part III, 30 per cent in each division of the examination and 35 per cent of the total Successful candidates getting not less than 60 per cent are placed in the First Class, those obtaining not less than 50 per cent are placed in the Second Class and those obtaining less than 50 per cent are placed in the Third Class Provision has also been made by which Bachelors of Arts in the Faculty of Oriental Studies and Fine Arts may qualify in a different optional group or different second Language of the Bachelor of Arts, in the Faculty of Arts Such candidates are required to undergo a course of one year in a College in the new subject selected

MASTER OF ARTS (M.A.) IN THE FACULTY OF ORIENTAL STUDIES

Admission to the M.A. Degree Course in the Faculty of Oriental Studies is open to graduates in Sanskrit The Course extends over two academic years and consists of the study of the following —

- (1) General Subjects — (i) History of Sanskrit Literature, (ii) Comparative Philology and History of Sanskrit Language (iii) Translation, (iv) Essay (on topics related to each special subject—Nyaya, Vedanta, Vyakarana, Sahitya or Jyothisa), and (v) (1) Yaska's Nirukta, (2) Mahabhasya; and (3) Siddhanta Kaudrudi (5 papers each of 3 hours' duration carrying 100 marks)
- (2) Special Subject — (One of the following subjects) —
Nyaya, Vedanta Vyakarana, Sahitya (4 papers each of 3 hours' duration carrying 100 marks)

The minimum marks for a pass and scheme of classification of successful candidates are the same as for the M.A. under the Faculty of Arts.

Bachelor of Teaching (B.T.) — Graduates of this University or any other recognised University who have undergone the prescribed course

of study for a period of one year will be admitted to this Examination.

The subjects and the Scheme of Examination are as follows —

	Hours	Marks
(i) Theory of Education and Educational Psychology.	3	100
(ii) School Organisation and Health Education	3	100
(iii) Methods of Teaching—General (In this paper each candidate will be required to answer 3 questions on General Methods and 2 questions on the introduction to the teaching of subjects)	3	100
(iv) Methods of Teaching— Optional Subjects (2 papers)	3 each	100 each
Total (5 papers)		500

(b) Practical Tests

Marks for the various aspects of Practical Training shall be allotted as follows —

(i) Teaching Practice (Complete setting up and running of film strip projector and epidiascope)	..	250
(ii) Practical working and maintenance of Audio-visual apparatus	.	30
Measurement and Diagnosis	.	30
(iii) Arts and Crafts	.	30
(iv) Practical aspects of Health Education and Citizenship Training	..	30
(v) Physical Education	..	30
Total	..	400

A candidate will be declared to have passed the written examination if he obtains (i) not less than 35 per cent in each of the five papers and (ii) not less than 40 per cent in the five papers taken together.

A candidate will be declared to have passed the practical test if he obtains (a) not less than 35 per cent in teaching practice, and (b) not less than 35 per cent in the other subjects taken together.

Successful candidates are classified separately for the written examination and the practical test. Successful candidates who obtain not less than 60 per cent of the total marks will be placed in the First Class and those who obtain less than 60 per cent but not less than 50 per cent in the Second Class. All other successful candidates will be placed in the third class.

Master of Education (M.Ed.) :—Candidates for admission to the M.Ed. Degree Course should have passed the B.T. Degree Examination of this University or of any other University accepted by the Syndicate as equivalent thereto. The course extends over one academic year.

The subjects of study and scheme of examination are as follows :—

Part I — (i) Comparative Education including problems of administration and organisation.

(ii) Educational Psychology including methods of research and elements of Statistics.

(iii) History and Philosophy of Education.

Part II — Thesis (on a subject approved by the Syndicate, embodying the record of original investigation or a critical and systematic study of existing data on the subject chosen).

No candidate will be allowed to submit his thesis unless he has passed in the written Examination.

The minimum for a pass in the written examination is 40 per cent in each of the papers and 45 per cent of the total marks.

Successful candidates who obtain not less than 60 per cent of the total marks will be placed in the First Class and all others in the Second Class.

No candidate will be admitted to the M.Ed. Examination on more than two occasions. Candidates who fail either in the written examination or in the thesis will be given one more chance. Candidates who fail in the written examination only will not be required to put in any additional attendance before re-appearing for the written examination.

Bachelor of Law (B.L.).—Graduates in arts or Science or Commerce of this or any other recognised University are admitted to the course which extends over two years. The first examination in Law which is held at the end of the first year consists of the following papers :—

Jurisprudence (1 paper), Roman Law (1 paper), The Law of Contracts including Negotiable Instruments and Specific Relief Act (2

papers). The Law of Torts (1 paper), Indian Constitutional Law (1 paper.)

The minimum for a pass is 40 per cent of the total marks and not less than one-third of the marks in each division of the examination. Those who obtain not less than 60 per cent are placed in the First Class, those obtaining 50 per cent and above are placed in the Second Class and the remaining successful candidates replaced in the Third Class.

The Final examination (B.L.) is open to those who having passed the First examination in Law have undergone the prescribed course of study for one academic year.

The final examination consists of the following seven papers:—

(i) Law of Property I, (ii) Law of Property II—T.P. Act and Statutory Tenancy Laws of Travancore-Cochin, (iii) Personal Laws—Paper I (Hindu Law and Marumakkathayam Law), (iv) Personal Laws—Paper II (Muhammadan Law, Indian Succession Act, Christian Succession Act), (v) Criminal Law, (vi) Elements of Public International Law, Peace and United Nations Organisation, (vii) The Law of Evidence.

The minimum for a pass is 40 per cent of the total marks and not less than one-third of the marks in each division of the examination. Successful candidates who obtain not less than 60 per cent of the total marks shall be placed in the First Class and those who obtain not less than 50 per cent shall be placed in the Second Class. All other successful candidates shall be placed in the Third Class.

Master of Laws.—Candidates appearing for the M.L. Degree examination are required to have passed not less than two years previously the B.L. Degree examination of this University or any other examination accepted by the Syndicate as equivalent thereto. The examination consists of a written examination of six papers and a *viva voce* Examination.

One of the following Branches may be offered for the written examination.

Branch I—Jurisprudence. Branch II—Constitutional Law and International Law. Branch III—Law of Crimes and Torts. Branch IV—Law of Contracts including Mercantile Law. Branch V—Hindu, Muhammadan and other Personal Laws in India. Branch VI—Law of Property.

(5 papers in each Branch)

Candidates who obtain not less than one-third of the marks in each paper and not less than 40 per cent of the total marks are declared to have passed the examination. Candidates who obtain not less than 60% of the aggregate marks are placed in the First Class; those obtaining not less

than 50 per cent of the aggregate are placed in the Second Class; all other successful candidates are placed in the Third Class.

Bachelor of Science (Engineering)—B.Sc. (Eng.)—The minimum qualification for admission to the Degree Course is the Intermediate examination of this University with Mathematics, Physics and Chemistry as optionals or any other examination accepted by the Syndicate as equivalent thereto. The course of study extends over 4 years.

First Examination in Engineering, Part I.—The course extends over one academic year. The following are the subjects for study and examination.

Group A—Mathematics and Mechanics. Group B—Applied Physics and Engineering Chemistry. Group C—Materials and Construction, Surveying, Group D—Practical Geometry, Building Drawing and Machine Drawing, Group E—Surveying (Practical). Group F—Sessional work.

The minimum for a pass will be 35 per cent of the marks in each group of written papers, 40 per cent in practical, 60 per cent of the sessional marks and 50 per cent of the total marks (examination plus sessional marks.)

First Examination in Engineering, Part II.—The course extends over one academic year after passing the First examination in Engineering, Part I, (or after having been promoted to the second year class). The following are the subjects for study and examination:—

Group A—Mathematics and Strength of Materials. Group B—Mechanical Engineering and Electrical Engineering. Group C—Machine Drawing and Hydraulics. Group D—Surveying, Building, Drawing Materials and Construction. Group E—(Practical) Workshop Practical and Surveying. Group F—Sessional Work.

The minimum for pass will be 35 per cent of the marks in each group of written papers, 40 per cent in practical 60 per cent of sessional marks and 50 per cent of the total marks which include all the marks of the previous year as carry over.

B.Sc. Degree Examination in Engineering, Part I:—The course extends over one academic year after passing the First Examination in Engineering, Part II, (or after having been promoted to the III year class) and consists of three branches, the subjects for study and examination being as follows:

(a) *Civil Engineering:*

Group A Mathematics; Strength of Materials and Theory of Structures.

Group B Structural Engineering and Hydraulics.

Group C Docks, Harbours and Geology; Roads and Railways.

Group D Surveying; Estimating and Civil Engineering Drawing.

Group E Practical: Strength of Materials Laboratory; Hydraulics Laboratory; Surveying.

Group F Sessional work.

(b) *Mechanical Engineering:*

Group A Mathematics; Strength of Materials and Theory of Structures.

Group B Structural Engineering and Hydraulic Machinery.

Group C Theory of Machines and Machine Drawing.

Group D Heat Engines; Electrical Technology and Economics.

Group E Practical: Workshop Practice; Hydraulics Laboratory; Heat Engines Laboratory and Strength of Materials Laboratory.

Group F Sessional work.

(c) *Electrical Engineering:*

Group A Mathematics; Strength of Materials and Theory of Structures.

Group B Structural Engineering and Hydraulic Machinery.

Group C Electrical Machinery and Electrical Drawing.

Group D Heat Engines; Electrical Measurements and Measuring Instruments; Economics.

Group E Practical Workshop Practice; Hydraulics Laboratory, Strength of Materials Laboratory and Electrical Laboratory.

Group F Sessional work.

Each candidate is required to take up the subjects prescribed for the branch he chooses. The minimum for a pass will be 35 per cent of the marks in each Group of written papers, 40 per cent in practical, 60 per cent of the sessional marks and 50 per cent of the total marks (examination marks *plus* sessional marks.)

B.Sc. Degree Examination in Engineering, Part II: The course extends over one academic year after passing the B.Sc. Degree examination in Engineering Part I, (or after having been promoted to the Fourth year class) and consists of 3 branches, the subjects of study and examination being as follows:

(a) *Civil Engineering:*

Group A Strength of Materials and Theory of Structures; Structural Engineering.

Group B Irrigation; Water Supply and Sanitary Engineering.

Group C Surveying; Agriculture and Town Planning.

Group D Design and Drawing (2 papers.)

Group E Practical: Surveying; Strength of Materials Testing Laboratory and *viva voce*.

Group F Sessional work.

(b) *Mechanical Engineering :*

Group A Heat Engines (2 papers.)

Group B Workshop Administration ; Workshop Practice and Machine Tools.

Group C Automobile and Aeronautical Engineering and Machine Design and Drawing.

Group D Power Plant Engineering ; Electrical Generation and Distribution.

Group E Practical : Workshop Practice ; Heat Engines Laboratory ; Electrical Laboratory and *viva voce*.

Group F Sessional work.

(c) *Electrical Engineering :*

Group A Electrical Machinery (2 papers.)

Group B Transmission and Protection ; Electrical Drawing.

Group C Electrical Communications and Heat Engines.

Group D Power Plant Engineering ; Electrical Generation and Distribution.

Group E Practical : Electrical Laboratory, Mechanical Engineering Laboratory and *viva voce*.

Group F Sessional work.

Each candidate is required to take up the subjects prescribed for the branch which he selected for the B.Sc. Degree Examination in Engineering Part I.

The minimum for pass will be 35 per cent of the marks in each group of written papers, 40 per cent in practical, 60 per cent of the sessional marks and 50 per cent of the total marks (examination marks *plus* sessional marks *plus* whole of the marks secured for the B.Sc. Degree Examination, Part I.)

Successful candidates will be admitted to the degree of B.Sc. (Eng.) and those who obtain not less than $\frac{2}{3}$ of the total marks shall be placed in the First Class and all other successful candidates shall be placed in the Second Class. Candidates obtaining not less than 75 per cent of the total marks shall be declared to have passed the examination with Distinction.

DEGREE OF BACHELOR OF MEDICINE AND SURGERY (M.B. & B.S.)

Admission to the course for the degree of Bachelor of Medicine and Surgery is open to candidates who have passed the Intermediate Examination with Biology, Physics and Chemistry, or the Pre-professional Exa-

mination in Medicine conducted by this University or any other examination recognised by the Syndicate as equivalent thereto and who are within the prescribed age limits.

Candidates for the M.B. & B.S. Examination will be required to engage themselves for not less than $4\frac{1}{2}$ academic years in professional study in a College of Medicine recognised by the Syndicate, $1\frac{1}{2}$ years of which should be spent in the study of Pre-clinical subjects and not less than three years in the study of clinical subjects subsequent to passing the First M.B. & B.S. Examination, provided that the fourth and fifth years of the course of studies prescribed for the final M.B. & B.S. Examination be spent in attendance at this University.

Candidates for the Degree of M.B. & B.S. will be required :

(i) to pass three examinations viz.,

(a) *First M.B. & B.S. Examination* :—

Part I—Organic Chemistry including Biophysics.

Part II—Anatomy and Physiology including Biochemistry.

(b) *Second M.B. & B.S. Examination* :—

Part I—Pharmacology.

Part II—Pathology including Bacteriology.

(c) *Third or Final M.B. & B.S. Examination* :—

Part I—Forensic Medicine and Toxicology, Preventive Medicine including Environmental Hygiene and Ophthalmology.

Part II—Medicine, Surgery and Obstetrics and Gynaecology.

FIRST M.B. & B.S. EXAMINATION

The course for first M.B. & B.S. consists of :—

- (i) A course of lectures in Organic Chemistry and Bio-physics including practical classes extending over a period of at least six months ;
- (ii) A course of lectures and demonstrations on Anatomy including elements of Human Embryology with special reference to their application to the clinical studies, extending over at least $1\frac{1}{2}$ academic years which will include the dissection of the whole body ;
- (iii) A course of lectures and demonstrations on Physiology including Bio-chemistry extending over $1\frac{1}{2}$ years ; and
- (iv) A practical course in Histology, Experimental Physiology and Bio-chemistry.

The Scheme of Examination and the minimum marks for pass are as follows :—

Part I

	<i>Total Marks</i>	<i>Minimum for pass</i>
Written Examination	100	45
Periodical Class tests	100	40
Oral Examination	50	..
	<hr/>	<hr/>
Total	250	125
	<hr/>	<hr/>
Practical Test	100	45
Record of practical work in the class (to be assessed by the Professor of the subject)	100	40
	<hr/>	<hr/>
Total	200	100
	<hr/>	<hr/>

Part II

The same as for Part I above.

Candidates who fail more than thrice in any of the subjects under Part II of the First M.B. & B.S. Examination will not be allowed to continue the course.

SECOND M.B. & B.S. EXAMINATION

The course of study for the Second M.B. & B.S. Examination extends over a period of one academic year for Pharmacology and two academic years for Pathology and Bacteriology taken concurrently.

The Examination consists of two parts:

Part I—Pharmacology.

Part II—Pathology including Bacteriology.

The Examination in each of the subjects Pharmacology and Pathology including Bacteriology consists of :—

- (1) a paper of three hours' duration ; (2) a practical examination each in Pathology and Bacteriology ; and (3) an oral examination.

The total marks and minimum marks for pass in the Second M.B. & B.S. Examination are the same as for the First M.B. & B.S. Examination.

FINAL M.B. & B.S. EXAMINATION

The course of study for the final M.B. & B.S. Examination extends over three years which should be spent at a Hospital or Hospitals recognised by the University and will cover courses in Forensic Medicine, Ophthalmology, Preventive Medicine including environmental Hygiene, Medicine, Surgery, Obstetrics and Gynaecology, as well as the special subjects prescribed in the syllabus.

The Final M.B. & B.S. Examination consists of two Parts :—

- Part I— (a) Forensic Medicine and Toxicology,
 (b) Ophthalmology,
 (c) Preventive Medicine including Environmental Hygiene.
- Part II— (a) Medicine including Therapeutics and Mental Diseases,
 (b) Surgery, and
 (c) Obstetrics and Gynaecology.

The scheme of examination is as follows :—

Part I—Forensic Medicine and Toxicology—One paper of 3 hours' duration, and an oral examination.

Ophthalmology—One paper of 3 hours' duration, a clinical examination and an oral examination of 3 hours' duration.

Preventive Medicine and Hygiene—One paper of 3 hours' duration, a practical examination and an oral examination.

Part II—Medicine— (a) Two papers each of 3 hours' duration.
 (b) A clinical examination in Medicine consisting of—

- (i) an examination of a patient and a written report thereon;
- (ii) an oral examination.

Surgery—Two papers each of 3 hours' duration. A clinical examination in Surgery and an examination in Operative Surgery; and an Oral Examination.

Obstetrics and Gynaecology—One paper of 3 hours' duration. A clinical examination in Obstetrics and Gynaecology and an oral examination including questions on specimen and appliances.

A candidate for Part I of the Final M.B. & B.S. Examination will be declared to have passed the examination if he secures the minimum marks specified below :—

(i) Forensic Medicine and Ophthalmology—Each.

	<i>Total Marks</i>	<i>Minimum for pass</i>
Written Examination (University)	100	45
Periodical class tests	50	20
Oral Examination (University)	50	..
Grand Total	200	100
Clinical and Practical (University)	50	22.5
Clinical Examination (Class)	25	10
Grand Total	75	37.5

(ii) Preventive Medicine & Hygiene.

Written Examination (University)	100	45
Periodical class tests	50	20
Oral Examination (University)	50	..
Grand Total	200	100
University Practical test	50	22.5
Record of Practical work in the class (to be assessed by the Professor of the subject)	25	10
Grand Total	75	37.5

A candidate will be declared to have passed Part II of the Final M.B. & B.S. Examination if he secures the minimum marks specified below :—

(i) Medicine and Surgery— Each

	<i>Total Marks</i>	<i>Minimum for pass</i>
Written Examination (University)	200	90
Periodical tests	100	40
Oral Examination (University)	50	..
Grand Total	350	175
Clinical Examination (University)	150	67.5
Clinical class examination (to be assessed by the Professor of the subject).	75	30
Grand Total	225	112.5

(ii) Obstetrics & Gynaecology

	<i>Total marks</i>	<i>Minimum for pass</i>
Written Examination (University)	100	45
Periodical class tests	50	20
Oral Examination (University)	50	..
Grand Total	200	100
Clinical Examination (University)	100	45
Clinical class examination (to be assessed by the Professor of the subject).	50	20
Grand Total	100	75

Candidates who pass Parts I and II of the examination at the first appearance will be ranked in the order of proficiency as determined by the total marks obtained by each in both parts and will be arranged in two classes, the first consisting of those who have obtained not less than 70 per cent of the aggregate marks and the second consisting of all the others.

Candidates who pass in the first class and who obtain not less than 75 per cent of the marks in any subject will be deemed to have passed with distinction in that subject.

Candidates who pass Parts I and II of the examination at a subsequent appearance will be ranked only in the second class.

All candidates who pass the examination subject by subject will be ranked in the second class separately.

DEGREE OF BACHELOR OF AYURVEDIC MEDICINE. (B.A.M.)

Admission to the course for the degree of Bachelor of Ayurvedic Medicine is open to candidates who have passed the Intermediate Examination with Biology, Physics and Chemistry, or the Pre-professional examination in Ayurveda conducted by this University or any other examination recognised by the Syndicate as equivalent thereto and who are within the prescribed age limits.

Candidates for the B.A.M. degree will be required to engage themselves for not less than 5 academic years in professional study in a College of Ayurvedic Medicine recognised by the University and to pass three examinations viz.,

- (a) First B.A.M. Examination.
- (b) Second B.A.M. Examination.
- (c) Final B.A.M. Examination.

FIRST B.A.M. EXAMINATION

The scheme of examination for the first B.A.M. is as follows:—

Part I—Darsanas (A written paper and an oral examination) ; Fundamental Principles (a written paper, and an oral examination) ; Dravyavignanam (Materia Medica) (a written paper, a practical examination and an oral examination).

Part II—Dravyavignanam (Bhcsajakalpam and Rasatantram) (Two written papers, a practical examination and two oral examinations) ; Sariravijnanam (a written paper, a practical examination and an oral examination) ; Arogyavignanam (a written examination and an oral examination) ; Anatomy (a written examination, a practical examination and an oral examination) ; Physiology (a written examination, a practical examination and an oral examination) ; Materia Medica (a written examination, a practical examination and an oral examination) ; Comparative studies (two written papers and an oral examination).

Part I of the examination may be taken at the end of the first year and Part II at the end of the second year.

SECOND B.A.M. EXAMINATION

The subjects for study and scheme of examination are as follows:—

A. Ayurveda

1. Pancha Lakshna Nidanas
2. Roga Vijnanam (Kayika—Rogas)
3. Bhaishajya—Vijnanam of Kayika Rogas
4. " Bhaishajya "—Snehasvedadi-Kriyakarma

B. Modern Medicine

5. Elements of General Pathology, Diagnosis and Bacteriology
6. Hygiene and Public Health

C. Comparative Studies

7. Comparative studies in Ayurveda and Modern Medicine in Pharmacology and Therapeutics, Hygiene and General Pathology

The examination shall consist of the following papers :—

A. Ayurveda

- | | |
|--|---|
| 1. Pancha Lakshna Nidanas | (A written paper and an oral examination) |
| 2. Rogavijnanam | (Two written papers, a practical examination and an oral examination) |
| 3. Bhaishajya — Vijnanam of Kayika Rogas | (Two written papers, a practical examination and an oral examination) |
| 4. Bhaishajya - Snehasvedadi-Kriyakarma | (A written paper, a practical examination and an oral examination) |

B. Modern Medicine

- | | |
|--|--|
| 5. Elements of General Pathology, Diagnosis and Bacteriology | (A written paper, a practical examination and an oral examination) |
| 6. Hygiene and Public Health | (A written paper, a practical examination and an oral examination) |

C. Comparative Studies

- | | |
|------------------------|--|
| 7. Comparative Studies | (Two written papers and an oral examination) |
|------------------------|--|

Final B.A.M. Examination

The course of study and scheme of study for the final B.A.M. Examination are as follows :—

A. Ayurveda

1. Stribalarogadya-adhikara
2. Manasikaroga-adhikara
3. Urdhvagaroga-adhikara
4. Salyatantra-adhikara
5. Agadatantra
6. Rasayanadya-adhikara
7. Pindasvedadi-Kriyakarma
8. Rasavaisesika Tantra Yuktivicara

B. Modern Medicine

9. Medicine
10. Surgery

11. Obstetrics, Gynaecology and Paediatrics
12. Ophthalmology
13. Medical Jurisprudence and Toxicology

C. Comparative Studies

14. Comparative studies in Ayurveda and in Medicine and Surgery and in Midwifery, Gynaecology and Paediatrics.

Scheme of Examination.

A. Ayurveda

1. Stribalarogadya-adhikara (A written paper, an oral examination and a practical examination)
2. Manasikaroga-adhikara — Do. —
3. Urdhvagaroga-adhikara — Do. —
4. Salyatantra-adhikara — Do. —
5. Agadatantra — Do. —
6. Rasayanadyadhikara — Do. —
7. Pindasvedadi-Kriyakarma — Do. —
8. Rasavaivesika Tantra — Do. —
Yuktivicara (A written paper and an oral examination)

B. Modern Medicine.

9. Medicine (A written paper, Clinical examination of patients and an oral examination)
10. Surgery — Do. —
11. Obstetrics, Gynaecology and Paediatrics — Do. —
12. Ophthalmology — Do. —
13. Medical Jurisprudence and Toxicology (A written paper and an oral and practical examination)

C. Comparative Studies

14. Comparative studies in Ayur-(Two written papers and an oral veda and in Medicine and examination)
Surgery and in Midwifery,
Gynaecology and paediatrics.

A candidate will be declared to have passed the Final B.A.M. Examination if he obtains in each subject at the University Examination 35% in the written papers and 50% of the grand total (i.e. written and

practical examination marks plus marks for oral examination if any and 40% each in the periodical class tests and record of practical work in the class.

All other candidates will be deemed to have failed in the examination.

Candidates who pass the Final B.A.M. Examination at the first appearance will be ranked in the order of proficiency as determined by the total marks obtained by each at the University Examination and will be arranged in two classes, the first consisting of those who have obtained not less than seventy per cent of the aggregate marks, the second consisting of all the others.

Candidates who pass in the First Class and who obtain not less than seventy five per cent of the marks in any subject will be declared to have passed with distinction in that subject.

Candidates who pass the whole examination at a subsequent appearance will be ranked only in the second class.

All candidates who pass the examination subject by subject will be ranked in the Second class separately.

DIPLOMA COURSE IN AYURVEDA

Candidates for admission to the Diploma in Ayurvedic Medicine (D.A.M.) will be required

(i) to have attained the age of 16 on or before the date of admission to the course; and

(ii) to have passed the Secondary School Leaving Certificate Examination conducted by the Travancore-Cochin Government, or an examination accepted by the Syndicate as equivalent thereto and to possess knowledge of Sanskrit and to have thereafter pursued for a period of not less than four years the prescribed courses of study in a College maintained by or admitted to the privileges of the University and to have passed the following examinations and further to have undergone nine months' internship in a hospital recognised by the Syndicate:—

- (a) First D.A.M. Examination.
- (b) Second D.A.M. Examination.
- (c) Final D.A.M. Examination.

First D.A.M. Examination

Candidates for the First D.A.M. Examination will be required to have attended the prescribed courses of instruction and demonstration in the following subjects for a period of not less than one academic year :

- (i) Darsanas.
- (ii) General Principles—Astangahridayasoothram.
- (iii) Dravyavijnanam Part I—Astangahridayasoothram, etc.

The scheme of examination is as follows:—

(i) The examination in each of the subjects (i) Darsanas and (ii) General Principles consists of a written paper of three hours' duration carrying 100 marks and an Oral Examination carrying 50 marks.

(ii) The examination in (iii) Dravyavijnanam Part I consists of a written paper of three hours' duration carrying 100 marks, a practical examination carrying 50 marks and an oral examination carrying 50 marks.

Second D.A.M. Examination

Candidates for the Second D.A.M. Examination will be required to have passed the First D.A.M. Examination and thereafter to have attended the prescribed courses of instruction and demonstration in the following subjects in a recognised institution for a period of not less than one academic year:—

- (i) Dravyavijnanam Part II.
- (ii) Sareeravijnanam.
- (iii) Anatomy.
- (iv) Physiology and Histology.
- (v) Swastha-Vritham.
- (vi) Panchalakshna Nidanam.
- (vii) Snehaswedadi Kriyakramam.

The scheme of examination is as follows:—

i. The examination in each of the subjects (i) Dravyavijnanam Part II (ii) Sareeravijnanam (iii) Anatomy and (iv) Physiology and Histology consists of

- | | | |
|--|----|------------|
| (a) a written paper of three hours' duration | .. | 100 marks. |
| (b) a practical examination | .. | 50 „ and |
| (c) Oral examination | .. | 50 „ |

ii. The examination in Swastha-Vritham consists of a written paper of three hours' duration carrying 100 marks and an oral examination carrying 50 marks. There will be no separate examination in (vi) and (vii) Panchalakshana Nidanam and Snehaswedadi Kriyakramam as these form part of the subjects for the Final D.A.M. Examination.

Final D.A.M. Examination

Candidates for the Final D.A.M. Examination will be required to have passed the Second D.A.M. Examination and thereafter to have attended the prescribed courses of instruction and demonstration in the following subjects.

(i) Nidanam.

(ii) Chikitsa :—

- (a) Kayachikitsa.
- (b) Stri-Bala-Chikitsa.
- (c) Salya Chikitsa including Marma Chikitsa.
- (d) Manasika-Roga Chikitsa.
- (e) Oordhwanga-Chikitsa.
- (f) Visha Chikitsa and Vyavaharayurvedam.
- (g) Rasayana-Vajeekaranangal.

The scheme of examination is as follows :—

i. The examination in Kayachikitsa consists of a written paper of three hours' duration carrying 100 marks and an oral and practical examination carrying 75 marks. Each candidate has to submit his case sheet under Kayachikitsa and 75 marks shall be set apart for the same.

ii. The examination in each of the remaining subjects for the Final D.A.M. Examination consists of a written paper of three hours' duration carrying 100 marks and a practical and oral examination carrying 50 marks.

Candidates for the B.A.M. Examination will be declared to have passed the Examination if they obtain in each subject 35 per cent in the written examination and 50 per cent of the total marks for the subject (i.e., for written, practical and oral examinations taken together). All other candidates will be deemed to have failed in the examination.

Successful candidates who obtain not less than two-thirds of the grand total will be placed in the first class, and all others in the second class.

Candidates who complete the examination by Parts will be placed in the third class.

Sahitya Visarada (Malayalam) and Vidvan (Tamil) Examinations :—

Candidates for the Sahitya Visarada or Vidvan (Tamil) examinations should have passed the Malayalam or Tamil High School Examination or the Sastri Test of the Travancore Education Department. Candidates who pass the Travancore E. S. L. C. Examination with Malayalam, Tamil as their Second Language or optional subject will also be eligible for admission to the Sahitya Visaradha and Tamil Vidvan Examination. Besides the main language (Malayalam or Tamil) candidates have to offer a subsidiary second language, Tamil or Sanskrit for the Sahitya Visarada examination and Sanskrit for the Vidvan examination, English will be the compulsory second language for both the examinations.

The course of study for each examination extends over a period of two academic years. The subjects for the examinations and the divisions are as follows :—

Division 1.—*Main Language.*—Prescribed text-books, Grammar, History of Language and Composition (5 papers.)

Division 2.—*Subsidiary second language*.—Prescribed text-books (one paper.)

Division 3.—*Compulsory second language (English)*.—Prescribed text-books (one paper.)

VIDVAN TITLE IN HINDI (OLD SCHEME)

Candidates for the Vidvan Examination in Hindi shall offer Hindi as the Main Language and Sanskrit as the Subsidiary language.

Candidates for the Vidvan Title in Hindi shall be required to have passed the Hindi Entrance Examination conducted by this University or the English School Leaving Certificate or the Secondary School Leaving Certificate Examination of the State of Travancore-Cochin with Hindi as one of the subjects or any other examination accepted by the Syndicate as equivalent thereto with Hindi as one of the subjects and to have subsequently undergone the prescribed course of study for a period of not less than two academic years in an Institution approved by the Syndicate and to have passed the Vidvan Examination in Hindi :

Provided, however, that until such time as the course is started in an Institution under the University, candidates shall be allowed to appear for the Hindi Vidvan Examination privately two years after passing the qualifying examination.

Candidates who have passed the following examinations shall be granted exemption from the operation of the above Ordinance and allowed to appear for the Vidvan Examination in Hindi :—

- (i) Vidvan (Hindi) Preliminary Examination conducted by this University ;
- (ii) Part II—Hindi—of the B.A./B.Sc. Degree Examination of this University or an examination accepted by the Syndicate as equivalent thereto ;
- (iii) The Rashtrabhasha Visarad Diploma Examination of the Dakshina Bharata Hindi Prachar Sabha, Madras.

Note—Candidates under this category shall be allowed to appear for the Vidvan Examination in Hindi till the examination of March-April 1953.

The scheme of examination shall be as follows :—

	<i>Hours.</i>	<i>Marks.</i>
Paper I		
Prescribed text-books—Poetry	.. 3	150
Paper II		
Prescribed text-books—Prose	.. 3	150

	<i>Hours</i>	<i>Marks</i>
Paper III		
Grammar, History of Language, Rhetoric, Prosody and Poetics ..	3	150
Paper IV		
History of Literature and Literary Criticism ..	3	150
Paper V		
Essay ..	3	150
Paper VI		
Subsidiary Language—Sanskrit ..	3	150
Total ..		900

All the first five papers shall be set and answered in Hindi. The sixth paper shall be set in Sanskrit and answered in Hindi.

A candidate shall be declared to have passed the Examination if he obtains not less than 40 per cent of the total marks for the first five papers and 30 per cent in the Sanskrit paper.

Post-Sahitya Visarada, Post-Hindi Vidvan, Post-Tamil Vidvan Degree Courses: These courses enable candidates who have taken the Sahitya-Visarada, Hindi Vidvan and Tamil Vidvan Title Examinations of this University or equivalent examinations to appear for the Degree Examination in the respective languages.

Candidates for the Post-Mahopadhyaya and Post-Sahityavisarada Degree Examinations will have to appear for

Part I—English Prose and General English (2 papers).

Part II—

For Post-Mahopadhyaya

Malayalam or Hindi or Tamil (2 papers).

For Post-Sahityavisarada

Sanskrit or Hindi (2 papers).

For Post-Hindi Vidvan

Sanskrit or Malayalam or Tamil (2 papers).

For Post-Tamil Vidvan

Malayalam or Sanskrit or Hindi (2 papers).

Note.—The courses of studies, syllabuses and Text-books for Parts I and II above are the same as those prescribed for B.A./B.Sc. Degree examination. The Post-Mahopadhyaya, Post-Sahityavisarada, Post-Hindi Vidvan and Post-Tamil Vidvan candidates are exempted from appearing for Sanskrit or Malayalam respectively under Part III by virtue of their proficiency in the language concerned.

VIDVAN TITLE EXAMINATION IN MALAYALAM, SANSKRIT, TAMIL, AND HINDI (NEW SCHEME)

Candidates for the Vidvan Title Examination should offer Malayalam or Sanskrit or Tamil or Hindi as the Main Language and one of the following languages, excluding that offered as the Main Language, as subsidiary language.

Malayalam, Tamil, Sanskrit, Hindi, Kannada.

The examination consists of a Preliminary Examination and a Final Examination. The Preliminary Course extends over a period of one academic year and the Final Course extends over two years.

Candidates for the Preliminary Examination should have passed the S.S.L.C. Examination conducted by the Education Department of the State taking the respective language as one of the subjects or the entrance examination conducted by this University.

The subjects for study and scheme of examination for both the Preliminary and Final Examinations are as follows:—

Main Language—5 papers. Subsidiary Language—1 paper. English—1 paper. (Total 7 papers)

Afzal-ul-Ulama Title Examination in Arabic:—The Afzal-ul-Ulama Course extends over a period of 4 academic years and the examination consists of two parts, Preliminary and Final.

Candidates for the Preliminary Examination should have passed the S.S.L.C. Examination conducted by the Education Department of the State or the Entrance Examination conducted by this University.

The subjects for study and scheme of examination are as follows:—

- (1) Tafsir, Hadith and Usul-i-Hadith ; (2) Fiqh, Aqaid and Mauhq ;
- (3) Prose and Poetry Text-books ; (4) History of Arabic Language & Literature ; (5) Translation from Arabic into Urdu, Tamil, or Malayalam and *vice versa* ; (6) Grammar, Rhetoric and Prosody.
- (6 papers each of 3 hours carrying 100 marks)

The subjects for study and scheme of examination for the Final part are as follows:—

- (1) Tafsir, Hadith and Ilmul Hadith ; (2) Fiqh, Usulul Fiqh and Ilmul Kalam ; (3) Prose and Poetry Text-books ; (4) History of Arabic Language & Literature ; (5) Falsafal and Balaghat ;
- (6) Islamic History. (6 papers each of 3 hours carrying 100 marks)

A candidate will be declared to have passed the examination if he obtains not less than 35 per cent of the total marks and not less than 30 per cent of the marks in each division of the Examination. The division is as follows:—

- (1) First three papers. (2) Last three papers.

Successful candidates who obtain not less than 60 per cent of the marks will be placed in the First Class and those who obtain less than 60 but not less than 50 per cent in the Second Class and all other successful candidates in the Third Class.

Diploma in Social Service:—The course for the Diploma in Social Service extends over one academic year and includes practical field work also.

The following are the subjects of study:—

Group (a) (1) Methods of Social Work (2) The Field of Social Work.

Group (b) (3) Social Economics (4) Rural Economics (5) Industrial & Labour Problems.

Group (c) (6) Personality & Behaviour (7) Child Welfare (8) Medical Inspection.

Group (d) A record based on original enquiry on some problem of limited scope connected with one of the subjects studied.

Scheme of Examinations:—Eight papers, each of two hours' duration carrying 50 marks. Record—100 marks.

The minimum for a pass is 40 per cent of the aggregate marks and 30 per cent in each subject separately.

Successful candidates obtaining not less than 60 per cent of the marks will be declared to have passed with distinction.

* INTERMEDIATE EXAMINATION IN COMMERCE

Admission to the Intermediate Course in Commerce is open to candidates who are holders of the Secondary School Leaving Certificate issued by the Director of Public Instruction, Travancore-Cochin State and declared eligible for admission to a Course of study in this University or have passed an examination recognised by the Syndicate as equivalent thereto.

The Course extends over two years. The subjects of study and scheme of examination are as follows:—

Part I—English (Prose, Poetry and Composition).

Part II—A Second Language.

(Note.—Papers under Parts I and II of the Examination are the same as those for Parts I and II of the Intermediate Examination in Arts and Science.)

Part III—The Examination under Part III consists of 6 papers as follows :—

Elements of Commerce (2 papers)

Commercial Geography (1 paper)

Secretariat Practice (1 paper)

Modern Language (1 paper)

Book-keeping (1 paper).

A candidate shall be declared to have passed the Intermediate Examination in Commerce if he obtains not less than

(a) 35 per cent of the marks in Part I

(b) 35 per cent of the marks in Part II

(c) 35 per cent of the marks in each division of the Examination in Part III

All other candidates shall be declared to have failed in the Examination.

Candidates who pass in all the Parts at the same Examination and who obtain not less than 50 per cent of the total marks shall be placed in the First Class; all the other successful candidates shall be placed in the Second Class. Candidates who pass in all the parts at the same examination and obtain not less than 60 per cent of the marks in any subject shall be declared to have gained Distinction in that subject. Candidates who pass the whole examination by passing in the several parts at separate examinations shall be placed in the Third Class.

* The course has been abolished, but the examination continues for failed candidates.

BACHELOR OF COMMERCE

Candidates for the Bachelor of Commerce Degree Examination shall unless exempted by the Syndicate, be required to have passed in the Intermediate Examination in Commerce of this University or an examination accepted by the Syndicate as equivalent thereto and to have subsequently undergone the prescribed course of study for a period of not less than two academic years in a college of this University.

The subjects of study and scheme of examination are as follows :—

Part I—English—

English Prose,

English Composition,

Precis writing and business correspondence (3 papers)

Part II—Second Language—Composition and Translation (1 paper).

Part III—The Examination shall consist of 8 papers as follows :—

- Economics-General (1 paper)
- Business Organisation and Administration (1 paper)
- Mercantile Law (1 paper)
- Industrial Law (1 paper)
- Accountancy (1 paper)
- Auditing (1 paper)
- Optional Subject (2 papers)

The minimum for a pass is 35 per cent in Part I, 35 per cent in Part II and in Part III, 30 per cent in each division of the Optional group and 35 per cent of the total. Successful candidates getting not less than 60 per cent are placed in the I Class, those obtaining not less than 50 per cent are placed in the II Class and those obtaining less than 50 per cent are placed in the III Class.

FEES

1. Candidates for examinations, diplomas and degrees shall pay the following fees :—

Rs.

(a) *Examination fees :*

<i>University Previous Examination</i>	25
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Pre-professional Examination

Whole Examination	30
Part I—(English) only	10
Part II—(Subjects) only	.. ..	20
Practicals (for each subject)	.. ..	3

Intermediate Examination :

First appearance—

Whole Examination or any part or parts	30
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Subsequent appearance—

Whole Examination	30
Part I only	12
Part II only	10
Part III only	.. ..	20

For each Science subject under Part III in which a Practical test has been prescribed an additional fee of Rs. 3.

Rs.

B.A./B.Sc. Degree Examination (Two-year Course) :

First appearance—

Whole Examination or any part or parts	50
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			Rs.
Subsequent appearance—			
Whole Examination	50
Part I only	22
Part II only	12
Part III only	..	..	28

For each subject under Part III in which a Practical Test has been prescribed an additional fee of :—

			Rs.
Main	..	..	5
Subsidiary	..	..	3
<i>B.Sc. Degree Examination (Transitory) :</i>			
Part I	..	..	15
Part II	..	..	45

For Practical test under Part II an additional fee of :—

			Rs.
Main	..	..	5
Subsidiary	..	..	3
<i>B.A. (Honours) Degree Examination :</i>			
Preliminary	..	..	15
Final	..	..	70

<i>B.Sc. (Honours) Degree Examination :</i>			
Preliminary	..	..	15
Final	..	..	70

For Practical test in each branch an additional fee of .. 15

<i>M.A. Degree Examination</i>	70
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<i>M.Sc. Degree Examination</i>	70
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For Practical test in each branch an additional fee of .. 15

B.Sc. Honours Degree Examination (Transitory)

For candidates including post-graduate students

			Rs.
Part I	..	..	15
Part II	..	..	75
Subsidiary	..	..	30
Main	..	..	45

For practical test an additional fee of .. 15

B.T. Degree Examination :

Whole Examination	35
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Subsequent appearance—

Written only	25
Practical only	15

			Rs.
<i>M.Ed. Degree Examination</i>	50
Subsequent appearance—			
Written papers only	..	..	35
Thesis only	..	..	20
<i>F.L. Examination</i>	..	..	50
<i>B.L. Degree Examination</i>	..	..	70
<i>M.L. Degree Examination</i>	..	..	150
<i>First Examination in Engineering Part I</i>	..	..	30
<i>First Examination in Engineering Part II</i>	..	..	30
<i>B.Sc. Degree Examination in Engineering Part I</i>	..	..	45
<i>B.Sc. Degree Examination in Engineering Part II</i>	...	..	60
<i>Diploma Examination in Engineering Part II</i>	..	..	35
<i>Diploma Examination in Engineering Part II</i>	..	..	35

Note.—The fee payable by a candidate who appears for one group only of any of the examinations in Engineering will be one half the full fee for the corresponding examinations. However no examination fee need be paid by a candidate who appears for sessional work group only.

			Rs.
<i>Diploma Examination in Social Service</i>	..	..	40
<i>B. Com. Degree Examination :</i>			
Part I	..	..	15
Part II	..	..	7
Part III	..	..	38
<i>M.B., & B.S. Degree Examination :</i>			
<i>First M.B. & B.S. Examination</i>			
First appearance :			
Whole Examination	..	..	55
Part I only	..	..	20
Part II only	..	..	40
Subsequent appearance :			
Organic Chemistry	..	..	20
Anatomy or Physiology	..	..	25
.. (Subject to the maximum for the Part or Parts)			

		Rs.
<i>Second M.B. & B.S. Examination</i>		
Whole Examination	.. ..	40
Part I only	.. ..	25
Part II only	.. ..	25
Separate subjects after first appearance :		
Part I—Pharmacology	.. ..	25
Part II—Pathology including Bacteriology	.. ..	25
<i>Final M.B. & B.S. Degree Examination</i>		
First appearance :		
Whole Examination	.. ..	105
Part I only—Preventive Medicine and Hygiene, Forensic Medicine and Ophthalmology	.. ..	55
Part II only	.. ..	60
Separate subjects after first appearance :		
Part I—One subject (Preventive Medicine and Hygiene or Forensic Medicine or Ophthalmology)	.. ..	20
Part II—One subject (Medicine, Surgery or Obstetrics and Gynaecology)	.. ..	25
<i>Diploma Examination In Ayurveda :</i>		
First Diploma Examination	.. ..	20
Second Diploma Examination	.. ..	25
Final Diploma Examination	.. ..	40
<i>Note:—The fee payable by a candidate who appears for one subject of any of the above examinations will be Rs. 15/- and for each additional subject an additional fee of Rs. 5/- subject to the maximum fee for the Examination.</i>		

		Rs.
<i>B.A.M. Degree Examination :</i>		
First B.A.M. Examination — Part I	.. ..	40
First B.A.M. Examination — Part II	.. ..	50
Second B.A.M. Examination	.. ..	50
Final B.A.M. Examination	.. ..	60

Note:—The fee payable by a candidate who appears for one subject of any of the above examinations will be Rs. 25/- and for each additional subject an additional fee of Rs. 10/- subject to the maximum fee for the examination.

Oriental Titles :

Sanskrit Entrance	10
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			Rs.
<i>Sahityavisarada</i>	15
<i>Vidvan-Tamil</i>	15
<i>Vidvan-Hindi :</i>			
Entrance	10
Preliminary	10
Final	..	..	15
<i>Vidvan in Malayalam, Sanskrit, Tamil, Hindi and Kannada (new scheme)</i> <i>& Afzal-ul-ulama</i>			
Entrance	..	..	10
Preliminary	..	..	25
Final	..	..	30

(b) *Degree or Diploma Fee :*

Diploma fee (for taking Degree at a Convocation in person)	..	..	3
Degree in absentia fee (including Diploma fee)	.	.	10
Fee for taking Diploma at Senate in person	..	..	3
Fee for taking Diploma at Senate in absentia	..	..	5
M.A. Degree fee	..	..	25
M.Sc. Degree fee	..	..	25
M.L. Degree fee	..	..	25
Ph.D. Degree fee	..	..	40

(c) *Fees for the submission of theses for Research Degrees :*

M.Litt.	..	..	150
M.Sc. Degree	..	..	150
Ph.D.	..	..	200
D.Sc.	..	..	200
D.Litt.	..	..	200
LL.D.	..	..	300

No fees will be levied in the case of Honorary degrees.

(d) *Other Fees :*

I. For Registration as a Matriculate	..	..	5
II. (i) For considering application for exemption from the provisions of the Ordinance relating to the production of attendance certificate, minimum qualification for admission to courses of study or examination, etc			10
(ii) For considering applications from <i>bona fide</i> teachers for exemption from the production of attendance certificate	..	...	10

	Rs.
(iii) For combination of attendance earned in two colleges	5
(iv) For considering application for recognition of an examination of another University or an examination conducted by other bodies outside the jurisdiction of the University	5
(v) For considering application for recognition of change of name	10
(vi) For obtaining a duplicate Diploma or Certificate	10
(vii) For obtaining a provisional certificate ..	5
(viii) For application for Intermediate or University Previous Certificate received by the Registrar after the prescribed date	3
(ix) For obtaining a Migration Certificate ..	5
(x) For obtaining a duplicate copy of the Migration Certificate	5
(xi) For issue of a certificate extract from the Register or Records of the University ..	5
(xii) For supplying to a candidate the grade certificate at the University Previous Examination and the pre-Professional Examination ..	1
(xiii) For supplying to a candidate a statement of Marks obtained by him at the Intermediate examination for each appearance (whether for a Part or Parts or for the whole examination) at examination prior to March 1955 or for supplying duplicate statement of marks for each appearance	2
(xiv) For supplying to a candidate a statement of Marks obtained by him at the Intermediate Examination on each occasion (March 1955 and thereafter)	1
<p><i>Note :—</i>This fee of Re. 1/- should be paid by all candidates appearing for the Intermediate Examination along with their examination fees.</p>	
(xv) For supplying marks to a candidate obtained at the B.A. and B.Sc. Degree examinations for each part.	2

	Rs.
(xvi) For supplying to a candidate a statement of marks obtained by him at any examination other than the Intermediate, B.A./B.Sc. Degree Examinations.	2
(xvii) For supplying detailed marks to a candidate obtained at Examinations for the details of each subject comprising a minimum (additional fee)	1
(xviii) For checking the addition of marks in each paper of a candidate for any University Examination (for each paper)	5
(xix) For late receipt of applications for admission to Examinations received within a period of 5 days after the prescribed dates ..	1
(xx) For supplying to Principals marks of all the successful candidates at the Intermediate or the University Previous Examination (for each Examination of the year) ..	20
(xxi) For supplying to Principals marks of all candidates (passed and failed) from a particular college for the B.A., B.Sc., B.A. (Hons.), B.Sc. (Hons.), F.L., B.L., B.T. or any other Examination. Annas 8 per candidate subject to a maximum of Rs. 10 for an Examination for every 50 candidates or less.	
(xxii) For supplying to Principals of Colleges detailed marks in each subject comprising a minimum (for each candidate) ..	1

Application for permission to open new colleges with a view to admission to the privileges of the University shall be sent to the Registrar so as to be received by him not later than the last day of Chingom (Malabar Era) preceding the academic year in which the courses of study are proposed to be started. If the Syndicate decides to proceed with the application it shall direct a local enquiry to be made by a competent person or persons appointed by it for the purpose. The applicant shall pay to the University a fee calculated at the rate of Rs. 100 for each member of the Inspection Commission or Commissions appointed by the Syndicate.

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The University is designed to be a unitary, teaching and residential University and this aim has been carried out by the University maintaining two colleges, formerly affiliated to the Allahabad University, viz., the Canning College and the King George's Medical College, the former of which was transferred by the Canning College Act of 1922, and the latter along with hospital was incorporated in March, 1921, in the Lucknow University. Provision is made, however, for recognition of colleges not maintained by the University.

In addition to the regular teaching in connection with the University courses provision is also made for tutorial and other supplementary instruction in Colleges and Halls under the control of the University.

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Vice-Chancellor :

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Ophthalmology—

Dr. C. P. Misra, L.M.S. (Punj.) *Emeritus Professor*.

Dr. Satyapal Gupta, M.B.B.S. (Luck.), F.R.C.S. (Edin.) D.O.M.S. (Lond.) *Professor*.

Capt. V. N. Khanna, M.B.B.S., D.T.M., D.O., M.S., *Reader* (on leave)

Dr. M. K. Mehra, M.B.B.S., D.O. (Lond.) F.R.C.S. (Oph.) F.R.C.S. (Surgery), *Temp. Officiating Reader*.

One Lecturer.

Obstetrics & Gynaecology—

Dr. (Kumari) A. D. Engineer, M.B.B.S., M.D., F.R.C.O.G., F.R.C.S., *Professor*.

Dr. (Kumari) Devaki Kutty, M.B.B.S., D.G.O. M.R.C.O.G., (Lond.) *Reader*.

Dr. (Kumari) M. Mukerji, M.B.B.S., M.D., M.S., M.R.C.O.G. *Temp. Reader*.

One temporary Lecturer.

Radiology—

Dr. C. Chatterji, B.Sc. (Alld.), M.B.B.S., D.M.R. (Lond.) *Professor*.

Two Lecturers and one Part-time Lecturer.

Tuberculosis—

Dr. R. N. Tandon, M.B.B.S., M.R.C.P., T.D.D., D.M.R.E. *Part-time Professor*.

One Lecturer.

Dentistry—

Dr. T. N. Chawla, B.Sc., B.D.S. (Ple), L.D.S., R.C.S. (Eng.) M.S. (U.S.A.) F.I.C.D., *Professor*.

Six Lecturers and six Demonstrators.

Orthopaedics—

Dr. B. N. Sinha, M.B.B.S. (Luck.), M.R.C.S., L.R.C.P. (Lond.) F.R.C.S. (Eng.), F.I.C.S. (Chicago). *Professor*.

Two Lecturers.

Diseases of Ear, Nose and Throat—

Dr. R. N. Misra, M.B.B.S., M.S. (Luck.), D.L.O., R.C.S. (Eng.), *Professor*.

One Lecturer.

FACULTY OF AYURVEDIC

Sri A. D. Kulkarni, *Principal*.

Vaidya Sri Shiv Dutt Shukla, M.A., A.M.S., (B.H.U.) *Reader*.

14 Part-time Readers, Lecturers and Demonstrators.

FACULTY OF LAW

Public Law—

Dr. G. S. Sharma, M.A., LL.B. (Alld.), J.S.D. (Yale), *Professor*

Dr. Vijai Narain Shukla, B.A., LL.M., Ph.D., *Reader*.

Sri L. N. Tandon, LL.M. *Officiating Reader*.

5 Lecturers.

Private Law—

Sri Shiva Shankar Nigam M.Sc., LL.M., *Reader*.

Dr. B. K. Gupta, B.Sc., LL.M. (Luck.), J.S.D. (Yale), *Reader*.

6 Lecturers.

Honorary Readers—

R. B. Ram Prasad Verma, B.A., LL.B., *Advocate*.

Sri S. C. Das, *Bar-at-Law*.

Sri G. G. Chatterji, B.A., LL.B., *Advocate*.

FACULTY OF COMMERCE

Department of Commerce—

Dr. K. C. Sarkar, M.A., Ph.D., *Reader*.

Dr. S. L. Sharma, Ph.D., F.C.C.S., *Reader*.

5 Lecturers and 4 associated colleges.

Applied Economics—

Dr. Om Prasad Gupta, Ph. D. (Lond.) F.S.S., *Professor*.

Sri Guru Dutt, M.A., M.Com. LL.B., *Officiating Reader*.

Six Lecturers.

Business Administration—

Prof. B. N. Das Gupta, B.A., A.S.A.A., F.C.A., *Professor*.

5 Lecturers.

ORIENTAL DEPARTMENT

Arabic and Persian Section—

Maulvi Syed Ali Naqi Naqvi, Fazil-i-Adab, Mumtazul-Afzil, Sadrul-Afzil, *Maulvi*.

Maulvi Syed Mohd. Naseer, *Maulvi*.

Shri Ejaz Ahmad, M.A., *Third Maulvi*. (on leave).

Shri Mohd. Rizwan Alavi, M.A., *Temporary Maulvi*.

Sanskrit Section—

Pandit Rudra Prasad Awashti, Vyakaranacharya, *First Pandit*

Pandit Anand Jha, Nyayacharya, *Temporary Pandit*.

CONSTITUTION OF THE UNIVERSITY

The officers of the University are the Chancellor, the Vice-Chancellor, the Treasurer, the Proctor, the Registrar, the Librarian, the Deans of the Faculties, the Dean of Students Welfare, the Principal of King George's Medical College, the Principals of Constituent colleges, the Accounts Officer and Superintendent and Deputy Superintendent Gandhi Memorial and Associated Hospitals. The Vice-Chancellor is a paid whole-time officer of the University and is the principal executive and academic officer of the University.

The authorities of the University are the following : (1) The Court which consists of 160 members. (2) The Executive Council which is the Executive Body of the University. (3) The Academic Council which is the Academic Body of the University and is responsible for the maintenance of standards of teaching and examination in the University. (4) The Committee of Reference which deals with items of new expenditure. (5) Board of Faculties which have charge of the courses of study and the teaching and research work in the subjects assigned to each Faculty.

NUMBER OF STUDENTS IN THE UNIVERSITY UNDER DIFFERENT FACULTIES DURING 1956-57

Faculty of Arts	..	4,481 including students in Associated colleges.
Faculty of Science	..	2,329 including 949 students of Christian College, Shia College, I. T. College, K. K. College and D. A. V. College.
Faculty of Medicine	..	1,265 including 206 of Kanpur Medical College.
Faculty of Law	..	861 including 116 in Kanya Kubja College.
Faculty of Commerce	..	830
M.Ed.	..	27
B.Ed.	..	55
Diplomas in Arabic	) ..	} 56
Diplomas in Persian) ..	
Diploma in Sanskrit	..	74
French Class	..	61
German Class	..	44
Russian Class	..	31

NUMBER OF SUCCESSFUL CANDIDATES AT THE DIFFERENT EXAMINATIONS IN 1957

Arts

B.A. (Pass).....	983	B.A. (Honours).....	20		
M.A. and M.A. Part II.....	413				
B. Ed.....	139				
D.Litt.....	2	Ph.D.....	15	D.F.A.	2
				D.P.A.	61
				M.S.W.	32

Science

B.Sc. (Pass)....	478	B.Sc. (Honours)....	15	M.Sc. and M.Sc. Part II....	139
		Ph.D.....	8		
		<i>Medicine (April)</i>			
M.D.....	19	M.S.....	16	M.B., B.S.....	191

Law

LL.B.....	363
LL.M.....	10

Commerce

B.Com.....	298	M.Com.....	43	Ph.D.....	0
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Laryngology and Otology

Diploma.....	5
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Diploma in Arabic

Fazil-i-Adab.....	3	Alim.....	1	Fazil-i-Tafsir.....	19
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Diploma in Persian

Dabir-i-Mahir.....	0	Dabir-i-Kamil.....	5
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Diploma in Sanskrit

Shastri.....	3	Acharya.....	13
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LIBRARY, MUSEUMS, LABORATORIES, ETC.

The University Tagore Library contains 1,53,446 volumes excluding the volumes in the Library of the King George's Medical College, Lucknow, and 2,082 volumes of the Bonarjee Students' Library, a Library composed mainly of text and recommended books and the membership of which is confined to poor students of the University. Departmental Libraries are also separately maintained and placed under the administrative control of the several heads of departments.

In addition to the Museums and Laboratories in the Faculty of Medicine, there is a Museum in each of the Departments of Zoology, Botany, Geology and Commerce; and there is a laboratory in each of the

Departments of Physics, Chemistry, Botany and Zoology. There is also a Statistical laboratory in the Department of Economics and Sociology and the Department of Mathematics and Statistics. A separate building has been constructed for the Psychological Laboratory and it has been equipped with up-to-date apparatus.

SCHOLARSHIPS, MEDALS AND FELLOWSHIPS

The following are the University and Endowed Scholarships and Medals granted to distinguished students of the University under prescribed conditions. The University grants eight scholarships, each of Rs. 15 per month, exclusively to women.

University Scholarships

In the Faculty of Arts and Science—

1. Seven M.A. scholarships at Rs. 30 per month each.
2. Seven M.Sc., scholarships at Rs. 30 per month each.
3. (i) Four Scholarships of Rs. 20 per mensem each for award to students taking the B.A. Pass or Hons. course tenable for two or three years according as they are awarded to Pass or Honours students.
(ii) Four Scholarships of Rs. 20 per mensem each for award to students taking B.Sc. Pass or Hons. course tenable for two or three years according as they are awarded to Pass or Honours students.
4. (i) One Scholarship of Rs. 20 per mensem for III year B.A. Hons. tenable for 12 months.
(ii) One Scholarship of Rs. 20 per mensem for III year B.Sc. Hons. tenable for 12 months.

In the Faculty of Medicine—

- Eight scholarships of Rs. 16 per month for I and II year students.
Twelve scholarships of Rs. 20 per month for III, IV and V year students.
One scholarship of Rs. 16 per month for I and II year B.D.S. students.
One scholarship of Rs. 20 per month for III and IV year B.D.S. students.

In the Faculty of Medicine (Ancient and Modern)—

- 4 scholarships of Rs. 16 per month each for 2nd and 3rd year students only.
6 scholarships of Rs. 20 per month each for 4th, 5th and 6th year students only.

In the Faculty of Law—

- One scholarship of Rs. 16 per month for LL.B.
Two scholarships of Rs. 30 per month for LL.M.

In the Faculty of Commerce—

Two scholarships of Rs. 16 per month each for B.Com.

Two scholarships of Rs. 30 per month each for M.Com.

Endowed Scholarships and Medals

Hewett Sir Haram Singh Gold Medal : Peary Lal Chak Medal : Pandit Suraj Narain Bahadur Gold Medal : Hamid Medal : Gopal Chandra Mukherji Memorial Medal ; Raja Sir Harnam Singh-Sir Harcourt Butler, Raja Sir Harnam Singh-Sir Ludovic Porter, and Raja Sir Harnam Singh-Raja Sir Mohammad Ali Mohammad Khan Medals : Pandit Debi Sahai Misra Gold Medals : R. B. Chaubey Shambhu Nath Misra Memorial Gold Medal : Dr. Chakravarti Medal for Service : Bhasker Atma Ram Deodhar Memorial Medal : Ohdedar Memorial Gold Medal : Bali Handoo Prize Medal-Bonarjee Research Prize of Rs. 200—Ruchi Ram Sahai Research Prize in Botany : Raja Shanker Sahai of Maurawan Medal : The Said-uz-zafar Khan Prizes for Anatomical Dissection to commemorate the Silver Jubilee of H. M. King George V—Eduljee Hormusha Parkash Medal : Wilhelmina-Buck Memorial Medal : Vangala Narasamma Guru Memorial Medal : Rameshwar Gurtu, Triloki Nath Gurtu and Anandi Lall Gurtu Memorial Medals : Ram Sahai Nigam Medal : The Ward Memorial Vidyant Medal : Shitla Prasad Memorial Gold Medal : R. B. Trilok Nath Gold Medal : Pt. S. N. Mushran Gold Medal : Captain Kunwar Indrajit Singh Scholarship : Gopi Nath Memorial Gold Medal : Ganga Devi Memorial Gold Medal : R. B. Shankar Dayal Nigar Gold Medal : Dr. Cameron Debi Dayal Misra Gold Medal : Sir Bisheswar Nath Gold Medal : Kunwar Bam Bahadur Shah Gold Medal : Kailash Nath Bhargava Gold Medal : Dr. Radha Kumud Mookerji Gold Medal : N. N. Sen Gupta Memorial Gold Medal, Sir Srinivasa Varadhachariar Gold Medal : Chandra Mohini Kaul Memorial Gold Medal : Dr. V. S. Ram Parliament Prize : Sugga Bibi Medal : Bishambar Nath Ghai Memorial Gold Medal : Jagdish Prasad Legal Research Gold Medal : Dr. Radha Kumud Mookerji Scholarships : Saraswati Dalmia Scholarships : R. B. G. M. Modi Scholarship : Canning College Gold Medal : White Memorial Gold Medal : Maharaja of Jhallawar Gold Medal : Empress Victoria Gold Medal : Pirie Memorial Gold Medal : Merle Gurti Gold Medal : Acharya Narendra Devamadhav Ram Gold Medal : Shri Kailashwati Memorial Gold Medal : Pandit Jagmohan Nath Chak Memorial Gold Medal : Seth Ram Das and Seth Ram Prasad Gold Medal : The Silver Jubilee Gold Medal : MacMahon Gold Medal : Dr. Rai Rajeshwar Bali Gold Medal : Pt. Tika Ram Misra Gold Medal : Chaubey Mukta Prasad Gold Medal : Rajendra Nath Sanyal Gold Medal : Kumari Vimla Puri Gold Medal : Lala Shanker Sahai-Har Sahai Gold Medal : Pandit Kishan Narain Vantoo-Pandit Maharaj Kishan Handoo Gold Medal : Swami Rama Tirtha Gold Medal : Munnihal Hiralal Medal : Brij Narain Chakbast Memorial Gold Medal : Jai Krishna Tandon Gold Medal : Ward Memorial Gold Medal : Pandit Jagpal

Krishna Gold Medal: Ghauthi Devi Mohanlal Lahoti Gold Medal: Birbal Sahni Memorial Gold Medal: Gopaldas Memorial Medal: Doctor Indrajit Singh Gold Medal: Prof. B. G. S. Acharya Memorial Prize: Dr. Aslam's Prize in Prosthetics, H. L. Patel Vishwa-Shanti Gold Medal: Sri Sidh Gopal Agarwal Gold Medal: M. B. Singh Gold Medal: Srimati Guru Devi Gold Medal: Dr. V. S. Huzurhazar Prize: J. A. Charitable Gold Medal: Dr. A. N. Singh Gold Medal: A. T. W. Employee's Union Gold Medal: Shrimati Jai Devi Bahia Gold Medal: Dr. Joy Gopal Mukerjee Gold Medal: Bhagat Harichand Bhatia Scholarship: Mr. Raman Nayar Memorial Gold Medal: Dr. E. E. Wali Mohammad Gold Medal: and Dr. R. Prakash Gold Medal

Fellowships are assigned to the Faculties in the following manner:

Faculty of Arts-5, Faculty of Science-5, Faculty of Medicine-1, Faculty of Law-1, Faculty of Commerce-1 and an additional Fellowship is awarded in any Faculty to a candidate who may be specially recommended for the purpose. The value of each Fellowship is Rs. 75 per mensem in the Faculty of Arts, Science and Law, and Rs. 100 per mensem in the Faculty of Medicine; and such Fellowships are ordinarily tenable for 21 months, i.e., from the 1st of August to the 30th of April of the year next after the succeeding year in the Faculties of Arts, Science, Commerce and Law and 12 months, i.e., from the 1st of October to 30th September, in the Faculty of Medicine.

PROVISION FOR RESEARCH PUBLICATION AND EXTENSION WORK

For the encouragement of advanced study and research work Fellowships have been instituted in the University as mentioned above.

There is one Bonarjee Prize of Rs. 200 per mensem as mentioned above for the best research production of the year, open both for the M.A. and M.Sc. There are prizes also for Ph.D., D.Sc., and D.Litt, theses.

Arrangements are made for delivery of a number of popular lectures in the course of the year such as General Extension Lectures, Lectures organized by the Vice-Chancellor, Lectures organized under the auspices of the Lucknow University Union, and lectures organized during the Convocation Week.

MILITARY TRAINING

The University has a Battalion of two companies of the National Cadet Corps. The authorised strength of the Bn. is 12 Officers and 470 Cadets including Cadet N.C.Os.

Arms, Equipment and Clothing.—The Arms Equipment of 'B' Coy. old U.O.T.C. unit, have been taken over by this N.C.C. The authorised scale of these things is being completed by Government from time to time.

Training N.C.C.—(1) The Central Government have posted 1 Officer, 1 J.C.O. and 4 N.C.Os. as instructional staff to this Unit.

(2) An annual training camp of 15 days' duration is permitted during the winter vacation and a cadre camp of one month's duration for N.C.Os. during the summer vacation.

ASSOCIATIONS IN THE UNIVERSITY

There is a University Union. All students enrolled in the Faculties of Arts, Science, Commerce and Law are *ipso facto* members of the Union. The Union holds debates, maintains a Library, Reading and Writing Rooms and Refreshment Room and is intended to promote corporate and social life generally. In addition to the Union, many societies and associations exist in various departments in the University and in Associated Colleges, such as, English Literary Society, Council of Educational Research, Ancient Indian Historical Association, Modern Indian History Post-graduate Society, B.A., Hons. Modern Indian History Society, European History Study Circle, Parliament, Post-graduate Political Science Association, Sociological Association, Culture Centre in the Economics Department, Islamic Studies Association, Bazm-e-Adab, Janavardhini Sabha, Sahitya-Fasthi. Kavi Sammelan, Science Association, Botany Club, Geologic Club, Old Boys' Association, Zoological Society, Physics Society, Chemical Association, Law Society, Post-graduate Law Association, Commerce Association, Anatomical Society, Growth Study Centre in the Department of Anatomy, Physiological Society, Hostel Unions, Lajnatul Adab, Clinical Society, Dramatic Associations, Philosophical Association, Music Society, etc.

Among the Debates organized are All-India Inter-University Sanskrit Debates, Inter-Collegiate Debates in History, Sanskrit and Hindi, All-India University Law Debate and Moot Court.

PROVIDENT FUND

There is a Provident Fund to which contributions are made by a member drawing at least Rs. 40 per mensem at the rate of 8 per cent of his salary, the University contributing at the rate of 12 per cent in the case of employees drawing not more than Rs. 500 per mensem and 10 per cent in the case of employees drawing not more than Rs. 1,000 but above Rs. 500 per mensem and 8 per cent in the case of employees drawing more than Rs. 1,000 per mensem. The interest on both of these contributions accrues to the account of the subscriber.

WOMEN'S EDUCATION

There are four separate Colleges for women where they can study for B.A. and B.Sc. Examinations and also for Bachelor of Education. There were 1677 students during 1956-57.

There are also separate hostels for women students.

PROVISION FOR SAFEGUARDING HEALTH, MEDICAL INSPECTION, DISCIPLINE, ETC.

Before admission to a hostel every student has to produce a certificate from the Medical Officer of the University or from a registered Medical Practitioner that he is physically fit for residence and every student of the University is physically examined at least once a year by the Medical Officer. Dispensaries and Medical Officers are attached to the Hostel and College.

There is a whole-time Director of Physical Instruction to look after the physical training of students. A system of compulsory physical training for all resident students has been introduced from the session 1936-37 under the expert supervision of the Director.

Breaches of Hostel Regulations are dealt with by the Warden, of College regulations by the Principal, of University regulations by the Proctor who is expected to attend to the misbehaviour or improper conduct elsewhere than within the compounds of the Colleges and Hostels.

ADMISSION TO THE UNIVERSITY COURSES OF STUDY, DEGREES AND EXAMINATIONS

The University confers the Bachelor's Degree (Pass and Honours) in Arts and the Master's Degree in Arts, Education and Social Work; in Science the Bachelor's Degree (Pass and Honours) and the Master's Degree. The Professional Degrees and Diplomas are Bachelor of Laws, Master of Laws, Bachelor of Commerce, Master of Commerce, Bachelor of Medicine and Bachelor of Surgery, Bachelor of Dental Surgery, Master of Surgery, Diploma in Medical Radiology and Electricity, Diploma in Laryngology and Otology, Diploma in Gynaecology and Obstetrics, Diploma in Clinical Pathology, Diploma in Tuberculous Diseases, Diploma in Ophthalmic Medicine and Surgery, Diploma in Public Health (suspended for the present), Diploma in Orthopaedic Surgery, Bachelor of Education, Diplomas in Arabic, Persian and Sanskrit, Diploma in Psychology (suspended for the present), Diplomas in French, German, Russian, Arabic, Persian and Sanskrit, Diploma in Public Administration, Diploma in Foreign Affairs, Diplomacy and Diploma in Archaeology, Diploma in Applied Anthropology, Diploma in Educational Psychology (Vocational Guidance and Mental Measurement) and Diploma in Physical Education. The following are the Doctorate Degrees: Ph.D., D.Litt., D.Sc., M.D., LL.D.

ADMISSION TO COURSES OF STUDY

Admission to a course of study for a Bachelor's Degree is confined to those who have passed either the Intermediate Examination of a recognised Indian University or of the Board of High School and Intermediate Education of U.P. or of Rajputana, Central India and Gwalior

(d) Candidate shall not be admitted to the Final examination or to any part of the examination prescribed for the Degrees of B.A., B.Sc. and B.Com., unless in addition to their attendance at and Completion of the regular course of study as prescribed under the rules they have attended 75 per cent of the University lectures in General Education consisting of the following topics :—

- (i) *Cultural heritage of India,*
- (ii) *General Science,*
- (iii) *Humanities.*

Tutorial Instruction :—

Special facilities have been provided for tutorial work to B.A., B.Com. and I.L.B. students. Marks will be given for the tutorial work. The marks obtained in the tutorial work and periodical tests will be integrated in the marks obtained at the B.A., B.Com. and LL.B. examinations.

3. In order to pass, candidates must obtain 33 per cent of the total marks in each subject: 1st Class 60 per cent; 2nd Class 48 per cent; 3rd Class 36 per cent.

BACHELOR OF ARTS (HONOURS)

Ordinances.

1. There shall be the following Honours Schools in the Faculty :—

(i) Arabic, (ii) Economics, (iii) Sociology, (iv) English, (v) European History, (vi) Hindi, (vii) Indian History, (viii) Islamic Culture and Civilization, (ix) Mathematics, (x) Persian, (xi) Philosophy, (xii) Political Science, (xiii) Psychology, (xiv) Sanskrit and Prakrit Languages, (xv) Sanskrit Culture and Civilization, and (xvi) Urdu with Persian.

2. Students shall be admitted to the Honours course in the beginning provisionally, but they will be selected on the result of an examination (written and oral) to be conducted by the Heads of the Departments concerned at the beginning of the second term. Only those students who get 50 per cent or above marks shall be allowed to continue in the Honours course.

3. Courses of study for the degree of B.A. Honours shall extend over a period of three academic years and there shall be an examination at the end of the third academic year. Students will not be permitted to enter for the examination for Honours later than the end of the fourth year from their admission to the B.A. course.

4. Every candidate for the degree of B.A. Honours shall, in addition to his Honours subject, be required to pass an examination in each of two subsidiary subjects and General English. The subsidiary

subjects which may be taken with a particular principal subject will be determined by the Dean, subject to the approval of the Academic Council.

5. The examination in the subsidiary subjects may be taken at the end of the second year, and shall be identical with the B.A. Pass degree examination in those subjects.

6. Candidates who pass the examination shall be classified in three divisions :—

First Division 60 per cent; Second Division 48 per cent; Third Division 36 per cent; Pass 30 per cent.

Examination in General English

The examination in General English for the B.A. and B.Sc. (Pass and Honours) and B.Com. candidates shall be the same as Paper I and Paper II of (*English General Section*) as detailed in the course of study in English for the B.A. (Pass) examination.

MASTER OF ARTS

1. Admission to the courses for the degree of Master of Arts shall be restricted to (a) candidates who have graduated with Honours at this University and (b) graduates with Honours of any other recognised University provided that the regular courses for their Honours degree extended over three academic years, and that the applications of these candidates be approved by the Academic Council.

2. A candidate may not in less than one year after passing the B.A. Honours examination, present himself for the M.A. degree examination in the subject in which he took Honours.

(For Pass Graduates)

The degree of Master of Arts shall be conferred on graduates who have pursued a regular course of study in the University for not less than two academic years since taking their Bachelor's degree, and passed the required examination.

The examination shall consist of two parts, Part I and Part II, held at the end of the first and second year respectively.

Part II of the examination in any subject shall be open to students who have passed Part I in that subject.

Divisions shall be awarded on the combined results of the examination in Part I and Part II.

The examination for the degree of Master of Arts shall be by means of papers, provided that in cases so specified a thesis may be offered in lieu of one of the papers or in lieu of two papers (Papers III

and IV) in Political Science and that if the examiners of the thesis consider it necessary, the candidate who offers the thesis may be required to undergo a *viva voce* test on the subject of the thesis.

Candidates shall also be required to undergo a *viva voce* test in the final examination except in the case of Mathematics.

Names of successful candidates shall be arranged in three divisions :—

- (i) First Division 60 per cent ; (ii) Second Division 48 per cent ;
- (iii) Third Division 36 per cent.

The subject of the examination shall be one of the following :—

- (i) A Language, (ii) Mental and Moral Science, (iii) History, (iv) Mathematics, (v) Economics, (vi) Political Science, (vii) Islamic Culture and Civilization, (viii) Sociology.

DOCTOR OF PHILOSOPHY

A candidate for the degree of Ph.D. shall have taken the M.A. degree of this University or of any approved University.

Before a candidate is permitted to supplicate for the degree of Ph.D., he must be certified by the Head of the Department and the Dean to have been engaged in his research work for not less than two academic sessions or six terms.

The dissertation submitted for the degree of Ph.D. shall be on some branch of one of the following subjects :— (i) Philosophy, (ii) History, (iii) Economics, (iv) Mathematics, (v) English, (vi) Sanskrit, (vii) Arabic, (viii) Persian, (ix) Political Science, (x) Urdu, (xi) Hindi, (xii) Statistics, (xiii) Education, (xiv) Psychology, (xv) Social Work, (xvi) Anthropology, (xvii) Sociology, (xviii) Ancient Indian History and Archaeology, (xix) Sanskrit Culture and Civilization, and (xx) Islamic Culture and Civilization.

DOCTOR OF LITERATURE

1. Applicants for the degree of Doctor of Literature shall have taken the Ph.D. degree of the Lucknow University or any other approved University not less than five years before submitting their work for the D.Litt. degree.

Provided that a candidate who has not taken the Ph.D. degree from this University shall have carried on research for not less than three terms under the supervision of the University.

Provided further that the period of five years may be reduced in the case of Ph.D.'s who are first class M.A.'s of more than 10 years' standing, with the approval of the Head of the Department and the Dean of the Faculty concerned.

DOCTOR OF LITERATURE (*Honoris Causa*)

The degree of Doctor of Literature may be conferred as an honorary degree in accordance with the provisions of Statute 14, upon any person, on the ground that he is, by reason of eminent position and attainments or by virtue of his contribution to the cause of learning, a fit and proper person to receive such a degree.

MASTER IN EDUCATION

1. Admission to the courses for the Degree of Master in Education shall be restricted to the graduates of the Lucknow University or any other recognised University.

2. The courses of study shall extend over a period of two academic years.

3. Graduates possessing a Degree or Diploma in Teaching or an equivalent qualification from a recognised University (B.Ed., B.T., L.T.), will be exempted from the first year's course. The examination for the second year's course shall consist of five papers and practical work.

DIPLOMA EXAMINATIONS

Diplomas in Arabic and Persian.—Students prepared by the University for these Diplomas and teachers of recognised local educational institutions are admitted to the Diploma Examination in Arabic and Persian.

There are three Diploma Examinations in Arabic: (i) Maulvi, (ii) Alim, and (iii) Fazil; and three Diploma Examinations in Persian: (i) Dabir, (ii) Dabir-i-Mahir, and (iii) Dabir-i-Kamil. The Maulvi and Dabir Examinations have been suspended for the time being. The courses of the Alim, Fazil, Dabir-i-Mahir and Dabir-i-Kamil Examinations are of one year's duration. Text-books are prescribed and question papers set on religious subjects. The Fazil course is one of specialised study in one of six prescribed groups of subjects. All the subjects prescribed for other examinations are compulsory.

The medium of examination is Urdu, but questions may be set and answers required in Arabic and Persian. 36 per cent in the aggregate and 33 per cent in each subject are the minima for a pass. 60 per cent and upwards will entitle a candidate to be placed in the First Division and 48 per cent or more will place him in the Second Division.

Diploma in Sanskrit.—Students prepared by the University and Teachers of local schools, Patshalas or other recognised public educational institutions are admitted to the examination in Sanskrit.

There are two Diploma Examinations in Sanskrit: (i) Shastri, and (ii) Acharya.

The Acharya Examination consists of two parts—Part I and Part II.

The Shastri course aims at giving the students a general education in Sanskrit learning, while the Acharya course aims at specialisation in one or more branches of Sanskrit Learning.

The medium of examination is Sanskrit. Some questions may be set and answers required in Hindi. 36 per cent in the aggregate and 33 per cent in each subject are the minima for a pass; 60 per cent and upwards will entitle a candidate to be placed in the First Division and 48 per cent and upwards will place him in the Second Division.

Diploma in Public Administration.—The course will extend over one full session for graduates and two full sessions for under-graduates. For the one year course there will be seven papers and for the two years course there will be an additional three compulsory papers. The examination consists of written papers as well as a practical test. The teaching of this Diploma course is arranged either in the afternoons or evenings or mornings as may be found necessary and convenient.

Diplomas in French, German and Russian.—The diploma courses in French, German and Russian extend over two years and consist of six periods of teaching per week in each year. There shall be one examination at the end of the first year and a final examination conducted at the end of the second year which shall consist of written and oral tests. Those who have passed the Certificate of Proficiency examination of the University in French or German or Russian may be admitted to the second year Diploma class in that language and may be allowed to appear for the Diploma examination at the end of that year.

For passing it is essential to secure 33 per cent of the marks separately in the written and oral tests and 55 per cent in the aggregate. Those who get 75 per cent or more will be declared to have passed with distinction.

EXAMINATIONS FOR CERTIFICATE OF PROFICIENCY IN FRENCH, GERMAN, RUSSIAN, ARABIC, PERSIAN AND SANSKRIT

The course of study extends over two academic years and is open to all University students as well as to Graduates, not necessarily reading in any Faculty of the University, and to teachers who fulfil certain conditions. The examination consists of a written paper. The minimum for a pass is 36 per cent.

BACHELOR OF SCIENCE

The course of study for the B.Sc. Pass degree shall extend over a period of two academic years.

Every candidate shall be required to pass in each of the subjects comprised in any one of the following groups of subjects and General English.

- (1) Physics, Chemistry, and Mathematics.
- (2) Chemistry, Botany, and Zoology.
- (3) Physics, Chemistry, and Botany.
- (4) Physics, Chemistry, and Zoology.
- (5) Physics, Botany, and Zoology.
- (6) Physiology, Botany, and Zoology.
- (7) Chemistry, Botany, and Physiology.
- (8) Chemistry, Zoology, and Physiology.
- (9) Chemistry, Physics, and Physiology.
- (10) Botany, Zoology, and Geology.
- (11) Geology, Chemistry, and Botany.
- (12) Geology, Chemistry, and Zoology.
- (13) Geology, Chemistry, and Physics.
- (14) Geology, Chemistry, and Mathematics.
- (15) Geology, Physics, and Mathematics.
- (16) Geography, Geology, and Economics.
- (17) Geography, Chemistry, and Geology.
- (18) Geography, Geology, and Zoology.
- (19) Geography, Geology, and Botany.
- (20) Geography, Geology, and Mathematics.
- (21) Geography, Mathematics, and Economics.
- (22) Geography, Mathematics, and Physics.
- (23) Geography, Botany, and Zoology.
- (24) Geography, Botany, and Physics.
- (25) Geography, Geology, and Physics.
- (26) Geography, Chemistry, and Botany.
- (27) Mathematics, Physics, and Statistics.
- (28) Mathematics, Chemistry, and Statistics.
- (29) Statistics, Mathematics, and Geography.
- (30) Statistics, Mathematics, and Economics.
- (31) Statistics, Mathematics, and Philosophy.
- (32) Botany, Zoology, and Statistics.
- (33) Botany, Statistics, and Geography.
- (34) Zoology, Statistics, and Geography.
- * (35) Euthenics: Applied Chemistry, the Family, and Living Science.
- (36) Mathematics, Physics and Astronomy.
- * (37) Chemistry, Zoology, and Mathematics.
- * (38) Chemistry, Zoology, and Statistics.
- * (39) Chemistry, Botany, and Mathematics.
- * (40) Chemistry, Botany, and Statistics.

*The combination is allowed for Isabella Thoburn College students only.

†Provided that no candidate shall be allowed to offer these groups unless he has passed the Intermediate examination in Science with Mathematics.

Students who are reading for a Pass Degree may, on the recommendation of the Head of the Department, be transferred by the Dean to an Honours course at any time up to the end of the first year of study.

The examination for the degree of Bachelor of Science shall be by means of papers, but candidates shall be required to undergo a practical examination, except in the case of Mathematics, examination in which shall be entirely by means of papers.

Names of successful candidates shall be arranged in three divisions :—

1st Division 60 per cent; 2nd Division 48 per cent; 3rd Division 36 per cent.

In order to pass, candidates must obtain a minimum of 33 per cent of the total marks in the written including class tests and also in the practical test, if any, in each subject separately.

BACHELOR OF SCIENCE (HONOURS)

There shall be the following Honours Schools in the Faculty :—

- (i) Physics, (ii) Chemistry, (iii) Botany, (iv) Zoology, (v) Mathematics, (vi) Geology.

The course of study for the B.Sc. Honours degree shall extend over a period of three academic years.

Every candidate for the degree of B.Sc. Honours shall, in addition to his Honours subject, be required to pass an examination in each of two subsidiary subjects and General English.

The following statement shows the subsidiary subjects which may be taken with a particular principal subject :—

(i) Physics—Chemistry and Mathematics. (ii) Chemistry—Physics and Mathematics, or Botany and Zoology. (iii) Botany—Zoology and Chemistry. (iv) Zoology—Botany and Chemistry. (v) Mathematics—Physics and Chemistry. (vi) Geology—Botany and Zoology. (vii) Botany—Geology and Zoology. (viii) Zoology—Botany and Geology. (ix) Geology—Physics and Mathematics.

The examination in the subsidiary subjects may be taken at the end of the second year, and shall be identical with the pass B.Sc. degree examination in those subjects.

The examination for the degree of Bachelor of Science with Honours shall be by means of papers but candidates shall be required to undergo a practical examination, except in the case of Mathematics, examination in which shall be entirely by means of papers.

Candidates shall be required to pass separately in the practical examination.

Candidates who pass the examination shall be classified in three divisions:—First Division 60 per cent. Second Division 48 per cent. Third Division 36 per cent.

Candidates obtaining not less 30 per cent of the total marks in the Honours subject may be awarded a Pass degree.

MASTER OF SCIENCE

(For Honours Graduates)

Candidates shall not be admitted to the course for the degree of Master of Science unless they have taken the degree of B.Sc. (Honours) of Lucknow University or of another University having Honours courses extending over three academic years.

A candidate may not in less than one year after passing the B.Sc. Honours Examination, present himself for the M.Sc. Degree Examination in the subject in which he took Honours.

(For Pass Graduates)

The degree of Master of Science shall also be conferred on graduates who have not taken Honours courses but have pursued a regular course of study in the University for not less than two academic years since taking their Bachelor's degree.

A student's choice of subject in the M.Sc. examination shall be restricted to one of the subjects taken for the Bachelor's degree.

The examination shall consist of two parts; Part I and Part II, and shall be taken at the end of the first and second years respectively.

Division shall be awarded on the combined results of the examinations in Part I and Part II.

The examination for the degree of Master of Science shall be either (i) by means of papers or (ii) partly by means of papers, partly by research. Candidates shall be required to undergo practical and *viva voce* examinations except in the case of Mathematics.

Candidates shall be required to pass separately in the practical examination.

Names of successful candidates shall be arranged in three divisions:—

- (i) First Division 60 per cent. (ii) Second Division 48 per cent.
- (iii) Third Division 36 per cent.

The subject of the examination shall be one of the following:—

- (i) Mathematics, (ii) Physics, (iii) Chemistry, (iv) Zoology,
- (v) Botany, (vi) Geology.

DOCTOR OF PHILOSOPHY

1. A candidate for the degree of Ph.D. shall have taken the M.Sc. degree of this University or of any approved University.

2. A Master of Science of the Lucknow University or of any other approved University shall be required to have—

- (i) pursued his researches under the supervision of the University for six terms.
- (ii) resided for six terms in the University or under conditions laid down for the residence of students. The Dean, on the recommendation of the Head of the Department, may grant permission to a candidate to reside outside Lucknow for purposes of collecting material for his thesis for not more than two out of the six terms; such exemption shall not be granted either for the first term or for the last term.

DOCTOR OF SCIENCE

Applicants for the degree of Doctor of Science shall have taken the Ph.D. degree of the Lucknow University or of any other approved University not less than five years before submitting their work for the D.Sc. degree:—

Provided that a candidate who has not taken the Ph.D. degree from this University shall have carried on research for not less than three terms under the supervision of the University.

The dissertation submitted for the degree of Doctor of Philosophy or Doctor of Science shall be on some branch of one of the following Sciences: (i) Physics, (ii) Chemistry, (iii) Botany, (iv) Zoology, (v) Mathematics, (vi) Geology.

The degree shall be conferred on the basis of published work only. There shall be no practical or *viva voce* examination.

DOCTOR OF SCIENCE (*Honoris Causa*)

The degree of Doctor of Science may be conferred as an Honorary degree, in accordance with the provisions of Statute 14, upon any person, on the ground that he is, by reason of eminent position and attainments or by virtue of his contribution to the cause of learning, a fit and proper person to receive such a degree.

MEDICINE

PRE-MEDICAL TEST

There shall be a Pre-Medical Examination for admission to the courses of study for the M.B., B.S., in the Faculty of Medicine of this University and it shall be held once a year.

No candidate shall be admitted to this examination unless he has passed either

- (i) the B.Sc. Examination of an Indian University incorporated by any law for the time being in force, with Chemistry and Biology ; or
- (ii) having passed the B.Sc. Examination, has passed at one time or other in that examination combined with the Intermediate examination leading there to in the three subjects of Chemistry, Physics, and Biology ; or
- (iii) the Intermediate Examination of the Board of High School and Intermediate Education, U.P., or Rajputana (including Ajmer-Merwara) Central India and Gwalior, or the Intermediate Examination of an Indian University incorporated by any law for the time being in force, with Chemistry (including Organic Chemistry), Physics, and Biology, in such courses of study as may be recognised for the purpose from time to time by the Faculty of Medicine.

Provided that he has attained the age of 17 years or will attain that age by November 30 of the year of admission.

Every candidate appearing at the examination shall be required to appear in the following subjects:—

- (1) Chemistry (including Organic Chemistry), (2) Physics, (3) Zoology, (4) Botany.

The examination shall be a competitive one for the purpose of filling up the declared number of vacancies, for (1) *bona fide* residents of the Uttar Pradesh, and (2) residents of other Provinces and Indian States which have no Medical College of their own and whose claim to admission has been recognised by the Executive Council on certain conditions.

Two seats have been reserved for students of the Delhi State on the condition that the candidates must secure a position within the sanctioned limit of numbers. Two seats have been reserved for scheduled caste candidates for a period of five years from the session 1950-51. As a temporary measure, two seats have also been reserved for Jammu and Kashmir candidates possessing the requisite qualifications for admission. Two seats have been reserved for the foreign students from overseas countries to be nominated by the Government of India. Four seats have been reserved for students nominated by the Nepal Government and one seat has been reserved for the nominees of the Government of India under the cultural scholarship scheme.

BACHELOR OF MEDICINE AND BACHELOR OF SURGERY

Candidates shall be admitted to the courses of study for the degrees of Bachelor of Medicine and Bachelor of Surgery extending over a

period of not less than five academic years after passing the Pre-Medical Test.

There are two examinations to be taken. The First Professional and the Final Professional. The First Professional Examination shall be in the subjects of Anatomy and Physiology and can only be taken at the end of the second year.

The Final Professional Examination shall consist of two Parts viz. :—

Part I

Pharmacology including Pharmacy, Materia Medica, and Pharmacological Therapeutics, Pathology and Bacteriology.

Forensic Medicine, Toxicology in their Medico-legal aspect.

Public Health—(Social Medicine and Public Health.)

An examination in Part I shall be held at the end of the fourth year of the student's Medical Course.

Part II

Medicine, including Therapeutics, Medical Pathology, and Mental Diseases.

Surgery, including Surgical Anatomy and Surgical Pathology, Ophthalmology; and

Obstetrics and Gynaecology.

Part I and Part II of the Final Professional Examination may be taken separately, provided that the candidate when appearing for this examination shall produce evidence of having passed the First Professional Examination or the Final Professional Part I Examination respectively of the University.

In Part I there will be one paper and an oral examination in Pharmacology, Forensic Medicine, Toxicology, Mental Diseases and Public Health and two papers and a practical and oral examination in Pathology. Part II of the Final Professional Examination consists of two papers and a Practical and Clinical examination in Medicine and in Surgery, one paper and an oral and clinical examination in Ophthalmology, and one paper and an oral examination in Obstetrics and Gynaecology.

The minimum for distinction in each subject is 75 per cent of the aggregate and for Honours it is 75 per cent in four subjects. The minimum for a pass in the written papers as well as in the practical and oral examination is 50 per cent.

DOCTOR OF MEDICINE AND MASTER OF SURGERY

Bachelors of Medicine and Surgery of three years standing can be admitted to the degree of Doctor of Medicine or Master of Surgery.

Candidates have to submit a thesis on a special subject in any of the following Departments :—

1. FOR THE DEGREE OF M.D.

(1) Medicine, (2) Pathology, (3) Forensic Medicine, (4) State Medicine, (5) Pharmacology, (6) Physiology, (7) Tuberculosis, (8) Radiology.

2. FOR THE DEGREE OF M.S.

(1) Surgery, (2) Ophthalmology, (3) Obstetrics and Gynaecology, (4) Anatomy, (5) Orthopaedic Surgery, (6) E. N. T. Diseases.

The examination for a candidate whose thesis is accepted shall consist of two Parts as under :—

FOR THE M.D. DEGREE

Part I.—It shall consist of three papers on the special subject other than Medicine selected by the candidate.

If the special subject is Medicine, then it shall consist of three papers as follows :—

(a) One paper on General Medicine, (b) One paper on Medical Pathology and Bacteriology, and (c) One paper on the latest advances in Medicine, together with commentaries on cases.

Provided that a candidate who has already passed the M.D. (Pathology) will be exempted from the paper on Medical Pathology and Bacteriology.

Part II.—It shall consist of an oral, practical and clinical examination.

(a) *M.D. in Medicine*.—An oral, practical and clinical examination in Medicine including Medical Pathology and Bacteriology. (b) *M.D. in subjects other than Medicine*.—An oral and practical examination in the special subject selected by the candidate.

FOR THE M.S. DEGREE

Part I.—It shall consist of three papers on the special subject other than Surgery selected by the candidate.

If the special subject is Surgery, it shall consist of three papers as follows :—

(a) One paper on General Surgery.

(b) One paper on Surgical Pathology and Anatomy; and

(c) One paper on the latest advances in Surgery together with commentaries on cases

Part II.—It shall consist of an oral, practical and clinical examination.

(a) *M.S.—Surgery*—A clinical, oral and practical examination in Surgery and Surgical Pathology including operations on the cadaver and including also the use of special methods, such as electricity and of special instruments for diagnosis and treatment.

(b) *M.S.—Ophthalmology or Obstetrics and Gynaecology.*—

(i) A clinical, oral and practical examination in the special subject selected by the candidate: and

(c) *M.S.—Anatomy*—

(i) An oral and practical examination in Anatomy.

BACHELOR OF DENTAL SURGERY

(1) A two year course for medical graduates (the scheme is under suspension for the present).

(2) A four year course for under-graduates.

A. Ordinances

1. *Admission.*—Admission to the four years under-graduate course of instruction shall be through a Pre-Dental Examination which shall be held at the same time, in the same subjects, and on the same conditions as those laid down for the Pre-Medical Examination, except that the Pre-Dental Examination is open to the resident (male or female) of all the Provinces and States of India.

2. Except as hereinafter provided, no candidate shall be admitted to the degree of Bachelor of Dental Surgery unless he or she shall have attended the prescribed course of study extending over a period of not less than four academic years, after passing the Pre-Dental Examination, in the last three of which clinical subjects should be studied.

The necessary attendance must be put in at the University Hospitals.

3. The First Professional Examination, at the end of the first year, shall be in the following subjects:—

(1) General Human Anatomy—Written, Oral and Practical.

(2) General Human Physiology with Histology and Biochemistry—Written, Oral and Practical.

(3) Dental Metallurgy including materials used in Dentistry—Written and Oral.

Candidates before presenting themselves for this examination shall produce evidence of—

(1) having completed the first year of the course;

(2) having attended complete courses of instruction approved by the University for the above-mentioned subjects;

(3) of having completed the required dissections of the human body.

Candidates who fail to appear in or to pass the First Professional Examination in five successive opportunities shall not be allowed to continue their studies, except with special permission of the Faculty.

4. The Second Professional Examination, at the end of the second year, shall consist of the following subjects :—

- (1) General and Dental Materia Medica—Written, Oral and Practical.
- (2) General Pathology and Bacteriology—Written, Oral and Practical.
- (3) Human Dental Anatomy, Physiology and Dental Histology—Written, Oral and Practical.

Candidates before appearing for this examination must produce evidence (a) of having passed the First Professional Examination, in all the subjects, and (b) of having completed their second year of study.

5. The Third Professional Examination, at the end of the third year, shall consist of the following subjects :—

- (1) Medicine—Written, Oral and Clinical.
- (2) Surgery—Written, Oral and Clinical.
- (3) Dental and Oral Pathology with Dental Bacteriology—Written, Oral and Practical.

Candidates before appearing for this examination, must produce evidence

(a) of having passed the Second Professional Examination in all the subjects ;

(b) of having completed their third year of study, (Course of Medicine and Surgery extending over two years during the II and III year of the course) ;

(c) of having received a course of clinical instruction in the University in the following subjects :—

- (i) Medicine.
- (ii) General Surgery.
- (iii) Venereal Diseases.

and (d) of having

- (i) attended as a clinical clerk in the Medical wards for one month,
- (ii) attended as surgical dresser in Surgical wards for one month,
- (iii) attended the Medical Out-Patients' Section and the Surgical Out-Patients' Section for separate periods of one month each,

- (iv) attended the Venereal Out-Patients' Section and the T.B. Department for separate periods of two weeks each.

6. The Final Professional Examination, at the end of the fourth year, shall consist of two parts, *viz.* :—

Part A

- (1) Dental Prosthetics, including Crown and Bridge Prosthesis—Written, Oral and Practical.

Part B

- (1) Operative Dental Surgery (Orientation in Dentistry and practice management) with Dental Jurisprudence, Ethics and Economics—Written, Oral and Practical.
- (2) Oral Surgery and Dental Radiology—Written, Oral and Clinical.
- (3) Orthodontia with Preventive and Children's Dentistry—Written, Oral and Clinical.

Candidates before appearing for this examination must produce evidence

(a) of having passed the Third Professional Examination, in all the subjects ;

(b) of having completed their fourth year of study and also the course of Dental Hospital Practice ;

(c) of having received a course of instruction in the University in the following subjects :—

- (i) Orientation in Dentistry,
- (ii) Practice Management,
- (iii) Dental Jurisprudence,
- (iv) Dental Radiology ;

(d) of having attended lectures in Dental Prosthetics over two academic sessions and Practicals for the full four years ;

(e) of having attended lectures over two terms in Crown and Bridge Prosthesis, practicals and demonstrations extending over three terms ;

(f) of having undergone lectures and practicals in Dental and Oral Surgery, General and Local Anaesthesia and Exodontia ; and

(g) of having completed lectures and practicals in Orthodontia extending over the last two academic sessions.

7. The Professional Examinations will be held, for the present, only once a year in April. The Supplementary Examination will be held in the month of July (2nd half).

DIPLOMA IN MEDICAL RADIOLOGY AND ELECTRICITY**(A) Ordinances**

The Course for this Diploma is open to graduates in medicine of this and other approved Universities and extends over one year.

The subjects of the course are as follows:—

Part I.—Electro-Magnetism. Electro-Technology as applied to Radio-diagnosis and Radio-therapeutics.

Part II.—(a) Radiography and Radio-diagnosis.
(b) Radio-therapy.

There will be two papers of 40 marks each on the subjects mentioned in (a) and (b) above.

The examination for the Diploma consists of two parts. Candidates may enter for Part I and Part II at the same examination; or may enter for Part I only.

A candidate will not be permitted to proceed to Part II of the examination unless he passes Part I of the examination.

The examination will consist of a paper, a practical examination and an oral examination in each of the subjects under Part I and Part II.

(B) Regulation

Eighty per cent attendance in lectures, demonstrations and practical classes will be required before a candidate is permitted to sit for the examination.

DIPLOMA IN LARYNGOLOGY AND OTOTOLOGY**(A) Ordinances**

The course for this Diploma is open to graduate in Medicine of this and other approved Universities, and extends over one year.

The examination shall consist of two parts.

Part I.—A written and oral examination on the Anatomy, Embryology and Physiology of the Structures in the Head, Neck and Thorax. There shall be only one paper to be set by the external examiner.

Part II.—A written, oral, practical and clinical examination on:—

(a) Special instruments and appliances.

(b) The Medicine, Surgery, Pathology and Bacteriology of the Nose, Throat, Ear and neighbouring organs.

There shall be two papers one to be set by the internal examiner and the other by the external examiner.

No candidate will be permitted to appear at the Part II of the examination unless he has previously passed the Part I. A candidate,

however, can take the two parts at the same examination, if he has, otherwise, fulfilled the conditions as regards the course of study.

(B) Regulations

For the present all teaching hospitals are recognised hospitals, and also the Irwin Hospital, New Delhi.

Eighty per cent of the attendance will be required before being permitted to sit for the examination.

DIPLOMA IN GYNAECOLOGY AND OBSTETRICS

Diploma in Gynaecology and Obstetrics

(A) Ordinances

The course for this Diploma is open to graduates in Medicine of this and other recognised Universities, and extends over one year.

The examination will be once a year in October. Failed candidates may be re-examined the following April.

The examination will be in one part and consist of two papers and a practical, clinical, and oral examination, as follows:—

- (a) Paper I—Obstetrics, including Anatomy of Female Pelvis.
- (b) Paper II—Gynaecology, including Gynaecological Pathology, Gynaecological Operation and Diseases of the New Born.
- (c) A practical, clinical, and oral examination in Obstetrics and Gynaecology, including clinical cases, Pathological specimens, instruments and dummy etc.

Fees for the course will be Rs. 300/- per year for Medical Graduates from U.P. Colleges i.e. Agra and Lucknow and Rs. 400/- per year for Medical Graduates from other Provinces.

The examination fee will be Rs. 200/-.

DIPLOMA IN CLINICAL PATHOLOGY

(A) Ordinances.

The course is open to Medical graduates of this and other approved Universities.

Not more than 4 candidates will be admitted at a time.

The examination will be held twice a year, ordinarily about the month of April and in October, along with the M.B.B.S. examination and will consist of two Parts:—

A—Written—There will be two Papers of 3 hours each with 150 marks assigned to each of them.

First Paper on the Theory and Practice of Morbid Histology, Haematology including Parasitology.

Second Paper on the Theory and Practice of Chemical Pathology and Clinical Bacteriology including Immunology.

Each Paper will consist of 6 questions divided into two parts. The two parts in the First Paper will be set and examined by the external examiner for M.B.B.S., and the Head of the Department of Pathology while the two parts in the Second Paper will be set and examined by the Reader and Lecturer in Pathology.

B—Practical and Oral examination will be conducted by all the four examiners (one external and three internal) in collaboration—300 marks will be assigned for practical and oral.

A candidate will be declared successful if he obtains 50 per cent marks in both the Parts A and B separately.

(B) Regulations

Students are required to attend a course of study and practical instructions for a period of one full year (November to October).

Eighty per cent attendance in the laboratory and also at lectures is essential.

The course of study will include Bacteriology, Morbid Histology, Haematology and Chemical Pathology.

The external examiner shall be the same as appointed for the M.B.B.S. examination. All the examiners will assess the two Parts of the examination in collaboration.

Candidates who have already been Lecturers Grade B or Demonstrators in any Department of Pathology of a recognized University for not less than one year, will be exempted from this training for a period of six months but must get themselves enrolled at the beginning of the course of instruction, i.e., in November.

Fee for the course will be Rs. 300 per year for the Medical Graduates of U.P. Colleges i.e. Agra and Lucknow Rs. 400/- per year for Medical Graduates from other Provinces. No concession will be shown to candidates mentioned in Para 5 in the matter of Fees.

Fee for the Examination will be Rs. 200 per candidate.

DIPLOMA IN TUBERCULOSIS DISEASES

(A) Ordinances

The course is open to Medical graduate of this and other approved Universities.

The minimum number of candidates to enter this course will be two and maximum four.

The examination will be held in two Parts. Part I examination will be held about the middle of April and Part II in October. Supplementary examination in Part I will be held a fortnight before the examination in Part II.

Fees will be Rs. 300 for the complete course for the students of this University and Agra University, and the rest will pay Rs. 400.

(B) Regulations

The course will consist of a study of the subject of Tuberculosis for a period of one year (November to October.)

The instruction will cover the academic and the applied aspects of the subjects.

It will be divided into two Sections :—

Section 1 : It will consist of the theoretical and applied aspects of Bacteriology, Pathology, Immunology and Practical laboratory methods in Tuberculosis. An examination consisting of two Papers, Practical and Oral will be held after 3 months of study.

Section 2 : It will consist of Theory and Clinical Practice in Tuberculosis including applied Anatomy, Physiology and Radiology. This study will include lectures, demonstrations, post-mortems and applied procedures (operations and diagnostic investigations) demonstrated and also done by the students.

This will also cover the subject of Prophylaxis or Anti-Tuberculosis measures in Tuberculosis. Students will be required to obtain first hand knowledge of working of various Anti-Tuberculosis Organisations including sanatoria. A short stay for some time at the Bhowali Sanatorium or the proposed Bara Banki Sanatorium or some other sanatoria outside the State will be required depending on circumstances. At the end of the course an examination consisting of two Papers and Practical and Oral will be held.

DIPLOMA IN OPHTHALMIC MEDICINE AND SURGERY

No candidate shall be admitted to the examinations of the Diploma in Ophthalmic Medicine and Surgery unless he has obtained the degree of M.B., B.S., from the University of Lucknow or such other University approved by the University of Lucknow.

The examination will be held in two Parts. Part I of the examination will cover the subjects scheduled under Part I of the Course. Part I of the course will commence in November and will be followed about the middle of April by Part I of the examinations.

Part II of the examination will cover the subjects scheduled under Part II of the Course. Part II of the course will commence in the middle of April and the examination will be held in the middle of October every year.

A separate examination for Part I of the course may be held in the last week of September for remanded students only.

No candidate will be admitted to Part II of the examination of the Diploma in Ophthalmic Medicine and Surgery unless he has satisfactorily attended a course of study for the Diploma at the University of Lucknow. He will be required to produce certificates showing:—

- (1) that he has passed Part I,
- (2) that he has attended a regular course of instruction for the Diploma at the University of Lucknow,
- (3) that he has attended a regular course of instruction in Operative Ophthalmic Surgery,
- (4) that he has been engaged during his clinical practices in the correction of errors of refraction.

No candidate shall be admitted to Part II of the examination of the Diploma in Ophthalmic Medicine and Surgery unless he has devoted subsequent to graduation, a period of ten months in clinical practice in the Ophthalmology Department of the King George's Hospital or in such other Hospitals as are approved by the Lucknow University specifically for this purpose.

Fees.—The fee for the complete course will be Rs. 300 for Medical Graduates from U.P. Colleges i.e. Agra and Lucknow and Rs. 400 per year for Medical Graduates from other States.

The fee for Part I of the examination will be Rs. 100.

The fee for the Part II of the examination will be Rs. 100.

Not more than eight candidates will be admitted to a course at a time.

DIPLOMA IN ORTHOPAEDIC SURGERY

A.—Ordinances

1. The Diploma shall be called "Diploma in Orthopaedic Surgery" (D. Orth., S., Lucknow) and shall be conferred after requisite examinations have been passed.

2. Candidates entering for this Diploma must possess the following qualifications:—

- (a) Passed the M.B.B.S. Examination of this University, or of any other institution recognised by this University.
- (b) He should have held an appointment in the Department of General Surgery or other specialised branches in a Hospital attached to a teaching institution, recognised by this University or any other Hospital recognised for the purposes by this University.

- (c) Attended the prescribed course of lectures and clinical demonstrations and worked as a clinical clerk in an affiliated College for one academic year in the Orthopaedic Department.

Provided that if the candidate possessed the post-graduate qualification (M.S. or F.R.C.S.) or has held an appointment in Orthopaedic Department for six months or more the period of clinical clerkship mentioned above shall be reduced to six months.

3. The admission of the candidates will be made in the month of September on receipt of application in the prescribed form in August and the course of Instruction will begin from the first day of November. This course will extend over one year (November-October).

4. Candidates have to submit the following with their application form :—

- (a) A certificate of character from the Principal of the Medical College affiliated to the University which he has attended and a certificate to the effect that he has passed his M.B.B.S. and attended the course of study prescribed.
- (b) An application for admission together with the prescribed fees for enrolment and admission.
- (c) Certificate of proficiency from two responsible persons preferably teachers under whom he has worked and displayed aptitude for Orthopaedic Surgery.

5. Not more than eight candidates will be admitted at a time.

6. The examination will be held twice a year, ordinarily about the month of April and in October and will consist of two parts.

Part I.—Anatomy, Physiology, General Pathology, and Bacteriology with special reference to :—

- (a) Paper I.—Anatomy including embryology and Physiology of the locomotor system, and allied orthopaedic conditions.
- (b) Paper II.—(i) Pathology of the deformities and lesions of the locomotor system.
- (ii) Physical-Medicine, Manual message, Rehabilitation, Physio therapy with occupational therapy.
- (iii) Broad outlines of general surgery.

Oral and Practical examination in basic sciences as mentioned above.

Part II.

Paper I.—Traumatology in general and with special reference to locomotor system, including applied questions in general Surgery.

Paper II.—(i) Recent advances in Orthopaedic Surgery and Applied Pathology.

(ii) Principles of treatment in Orthopaedic Surgery and organisation of Orthopaedic treatment including plaster technique.

(iii) Electrical treatment with reference to Orthopaedic conditions.

(iv) Operative Surgery and Manipulative Surgery. Oral, Clinical and Practical Examination.

Each paper will consist of six questions.

The examination shall be conducted by one internal examiner who shall be the Head of the Department of Orthopaedic Surgery and one external examiner.

There will be 15 days difference between the dates of Parts I and II examination.

7. No candidate shall be permitted to appear at Part II Examination unless he has passed the Part I. A candidate, however, can take the two Parts at the same examination if he has otherwise fulfilled the conditions as regards the courses of study.

8. Exemption will not be granted from any Part of the examination except in Part I for those who have passed Primary F.R.C.S. Examination of recognised colleges, subject to approval by the Head of the Department of Orthopaedic Surgery.

9. Examination fee .. Rs. 100/- for each Part.

Tuition fee for the course will be Rs. 300/- per session from the students of this University and Agra University and Rs. 400/- from students of other Universities.

SCHEME OF EXAMINATION

Part I

Paper I	..	50 marks.
Paper II	..	50 marks.
Oral and Practical	..	200 marks.
Pass marks		
Written	..	40%
Oral and Practical	..	50%
Aggregate	..	50%
Time allowed for each Paper		3 hours.

Part II

Paper I	.	50 marks.
Paper II	.	50 marks.
Oral, Clinical and Practical	.	300 marks.

The Practical, Clinical and Oral examinations, carrying a total of 300 marks shall consist of:—

(a) Clinical	.	100 marks.
(b) Practical	.	100 marks.
(c) Oral	.	100 marks.

Pass marks.

Written	.	40%
Total of Clinical, Practical and Oral	.	50%
Aggregate	.	50%
Time allowed for each paper.		3 hours.

COURSES OF STUDY

Part I.

Anatomy, Physiology, General Pathology and Elementary Bacteriology with special reference to:—

- (i) The Anatomy with Embryology and Physiology of the Locomotor system.
- (ii) The deformities and diseases of the locomotor system with special reference to development anomalies and their clinical manifestations.

Part II.

- (i) (a) Surgical Pathology with special reference to orthopaedic system.
- (b) Traumatology in general with special reference to locomotor system and organisation of first aid posts.
- (c) Physical Medicine—Physio-therapy in relation to treatment of orthopaedic conditions and fractures.
- (d) Rehabilitation and occupational therapy and vocational training.
- (e) Principles of treatment in Orthopaedic Surgery and recent advances in Orthopaedic Surgery.
- (f) Plaster techniques
- (g) Manipulative Surgery.
- (h) Applied Electrical treatment and Radiological Diagnosis.
- (ii) Broad outline of general Surgery as prescribed for the M.B.B.S. Course of the University.

LAW

Bachelor of Law (LL.B.)

Bachelors of Arts or Science or Commerce of the Lucknow University or of any approved University are admitted to the courses of study for the LL.B. Degree which extends over two academic years. The examination consist of two parts—the Previous and the Final, held at the end of the first and second year respectively.

For the Previous examination the following subjects are prescribed for study :—

1. International Law.
 - (i) International Law—Peace.
 - (ii) International Law—Disputes, War and Neutrality.
2. Legal History :
 - (i) English Legal History.
 - (ii) Indian Legal History.
3. Mohammadan Law.
4. Constitutional Law.
 - (i) English Constitutional Law.
 - (ii) Indian Constitutional Law.
5. Contracts.
 - (i) Contracts—General Principles.
 - (ii) Particular Contracts.
6. Law of Torts.
 - (i) Torts—General Principles.
 - (ii) Torts—Specific Wrongs.
7. Partnership, Companies and Negotiable instruments.
 - (i) Partnership and Negotiable Instruments.
 - (ii) Companies.

For the Final examination the following subjects are prescribed for study :—

1. Law of Transfers and Easements.
 - (i) Transfer of Property—General Principles.
 - (ii) Easements and Specific Transfers.
2. Criminal Law and Procedure.
 - (i) Criminal Law—General Principles.
 - (ii) Criminal Law—Specific Crimes and Criminal Procedure.
3. Hindu Law.
 - (i) Hindu Law—Domestic Relations.
 - (ii) Hindu Law—Property and Succession.

4. Equity, Trusts and Legal Remedies.
 - (i) Equity and Trusts.
 - (ii) Legal Remedies.
5. Civil Procedure, Pleadings, Evidence and Limitation.
 - (i) Evidence and Limitation.
 - (ii) Civil Procedure and Pleadings.
6. Jurisprudence.
 - (i) Nature and sources of Law.
 - (ii) Elements of the Law.
7. Land Law in U.P.
 - Or
 - Labour Law
 - Or
 - Private International Law
 - Or
 - Law of Taxation
 - Or
 - Principles of Legislation and Interpretation
 - Or
 - Administrative Law in India.

The examinations for the degree of Bachelor of Laws shall be conducted wholly by means of papers.

In order to pass, a candidate must (a) obtain 30 per cent of the marks in each paper and (b) obtain 50 per cent of the total marks obtainable. First Division 66 per cent ; Second Division 50 per cent.

Master of Laws (LL.M.)

Ordinances—

1. Every candidate for admission to the examination for the degree of Master of Laws shall satisfy the following conditions:—

- (a) He must have passed the examination for the degree of Bachelor of Laws of this University or the examination of any other University or institution recognised as equivalent to the degree of Bachelor of Laws of this University.
- (b) He must, after passing that examination, have pursued to the satisfaction of the Dean of the Faculty of Law the course of study prescribed for the degree of Master of Laws.

2. The examination shall consist of two Parts, Part I and Part II. A candidate shall offer himself for examination in Part I after having pursued the prescribed course of study for not less than one academic year. No candidate shall be eligible for admission to Part II of the examination unless he has been declared successful at Part I of the

examination and has thereafter pursued the prescribed course of study for one academic year.

Provided that a person who holds the degree of Master of Laws of the University of Lucknow may, on the recommendation of the Dean, be exempted by the Vice-Chancellor from the requirement relating to Part I of the examination.

3. (a) Every candidate appearing in Part I of the examination shall be examined in 'Legal Theory' and 'Constitutional and Legal History', each consisting of two papers as follows.

Legal Theory :—

Paper I—Jurisprudence.

Paper II—Legislation-Principles, Method and Interpretation.

Constitutional and Legal History :—

Paper I—Legal History of England and India.

Paper II—Constitutional Law of India.

(b) Every candidate offering himself for examination in Part II of the examination shall be examined in four papers chosen by him with the permission of the Dean from not more than two of the following groups :—

Group I.

1. Law of Contracts.
2. Agency, Partnership and Companies.
3. Sale of goods, Negotiable instruments, Carriers and Insurance.
4. Government Regulation of Business.

Group II

1. Torts—General Principles.
2. Torts—Specific Wrongs.
3. History and Principles of Criminal Law.
4. Theory of Crime and Punishment.

Group III.

1. Sources and History of Hindu Law.
2. Principles of Hindu Law.
3. Statute Law in India relating to guardianship, marriage and succession.
4. Principles of Mohammadan Law.

Group IV.

1. Sources and History of Mohammadan Law.
2. Principles of Mohammadan Law.
3. Statute Law in India relating to guardianship, marriage and succession.
4. Principles of Hindu Law.

Group V.

1. British Constitutional Law.
2. Constitutional Law of U.S.A. and Switzerland.
3. Federal system in the Commonwealth.
4. Federal Systems in Asia.

Group VI.

1. History and Principles of Equity.
2. Trusts and Charitable Endowments.
3. General Principle of Transfer of Property and History of English Land Law with special reference to the Law of Real Property.
4. Specific Transfers.

Group VII.

1. International Relations.
2. International Organisation.
3. Public International Law.
4. Conflict of Laws.

Group VIII.

1. British Constitutional Law.
2. Federal Law with special reference to Indian Constitutional Law.
3. Administrative Law in U.S.A. and England.
4. Administrative Law in India.

Group IX.

1. History and Principles of Roman Law.
2. Roman Law and Common Law.
3. English Law in India.
4. Comparative Jurisprudence.

Group X.

1. History and Principles of Public Administration with special reference to India.
2. Law and Practice of Local Government.
3. Administrative Process.
4. Principles and Problems of Federal Finance with special reference to India.

4. The Examination shall be conducted *viva voce* and by written papers; provided that a thesis on a topic approved by the Dean in any of the subjects comprised in the group chosen by a candidate for Part II of the examination may be offered in lieu of two of the papers. The examination in each paper shall be of three hours' duration and shall carry one hundred marks. The *viva voce* examination also shall carry one hundred marks. It will be conducted by three examiners, at least one of whom must be an external examiner.

5. In order to be declared successful in Part I of the examination a candidate must obtain 40 per cent of the marks in Legal Theory and Constitutional and Legal History each and in the aggregate 50 per cent of the total marks obtainable. In order to be declared successful at the LL.M. examination a candidate must obtain 40 per cent of the marks in the *viva voce* examination and in each paper offered by him and in the aggregate 50 per cent of the total marks obtainable.

Provided that any shortage not exceeding five marks in any one paper shall be excused and the candidate declared to have passed the examination if the total number of marks obtained by him on the aggregate exceeds 50 per cent of the total marks obtainable by at least ten times the number by which he is short of 40 per cent of the marks in that paper.

6. Divisions shall be awarded on the combined results of the examinations in Part I and Part II. Those of the successful candidates who obtain 50 per cent and upwards and below 66 per cent of the total marks obtainable shall be placed in the Second division, and those of the successful candidates who obtain 66 per cent and upwards of the total marks obtainable shall be placed in the First division.

Doctor of Laws. (LL.D.)

1. No candidate shall be admitted to the degree of Doctor of Laws unless he is a Master of Laws of not less than three years' standing of the Lucknow University or of any approved University.

2. He must be engaged in research work in the University of not less than two academic sessions or six terms. The time spent with the permission of the Dean by a candidate outside Lucknow for the purpose of collecting material for the thesis shall be included in computing the period of two academic sessions.

Doctor of Laws (Honoris Causa)

The degree of Doctor of Laws may be conferred as an Honorary degree in accordance with provisions of Statute 14, upon any person, on the ground that he is by reason of eminent position and attainments or by virtue of his contributions to the cause of learning, a fit and proper person to receive such a degree.

COMMERCE

Bachelor of Commerce (B.Com.)

Students who have passed the Intermediate Examination in Commerce of the Board of High School and Intermediate Education, U. P., or of the Board of High School and Intermediate Education, Rajputana (including Ajmer-Merwara), Central India and Gwalior, or of the Nagpur University, or of the Patna University; or of the Calcutta University with Accountancy and one other Commercial subject; or

in Arts of the Madras University with Accountancy and one other Commercial subject; or the Commercial Diploma Examination of the Punjab University; or of the Education Department of Delhi, Ajmer-Merwara and Central India, or the Intermediate Examination in Arts (Group B-Special) of the Delhi University); or in Commerce under the Faculty of Arts of the Banares Hindu University; or in Commerce of the Aligarh Muslim University; or in Commerce of the Rajputana University; or in Arts (with Economics) or in Commerce of the Utkal University; or the Intermediate Examination in Group E of the Board of Intermediate and Secondary Education, Dacca; or the Intermediate Examination of the Andhra University, in three Commercial subjects, viz., Accountancy, Banking and Economic Geography or Mathematics; or the Intermediate Examination or the B.A. Examination of any recognised University, or the Intermediate Examination of the Board of High School and Intermediate Education, U. P., Rajputana (including Ajmer-Merwara), Central India and Gwalior, or of the Board of Intermediate and Secondary Education, Dacca, or of the Jammu and Kashmir University; or the Examination conducted by the Board of Secondary Education, United States of Madhya Bharat, with Economics as one of their subjects, provided that on joining the Commerce Faculty of the University they take up Banking or Actuarial Mathematics for both the B.Com. Previous and Final Examinations; or Part I of the Associate Examination of the Indian Institute of Bankers after passing the Intermediate Examination; or the All-India Senior Diploma in Commerce of the All-India Board of Commercial Studies, Delhi, are admitted to the course of study for the B.Com. Degree extending over two academic years or has passed the Intermediate Examination in Commerce of the Saugor University.

The Examination shall consist of two parts, the Previous and the Final, held at the end of the first and second year respectively. No candidate shall be allowed to appear at the final Examination unless he has passed the Previous examination.

In the Previous Examination every candidate shall be required to pass in the following three Groups:—

- (1) (i) Accounting; (ii) Business Organisation.
- (2) (i) Banking; (ii) Economics.
- (3) One Group out of the following two Groups:—

Either

- (a) (i) Indian Industries and Resources; (ii) Transport.

or

- (b) (i) Insurance; (ii) Mathematics.

or

- (ii) Co-operative Organization and Finance.

In the Final Examination, every candidate shall be required to pass in the following four Groups :—

- (1) Advanced Accounting or Advanced Banking or Actuarial Science.
- (2) (i) Mercantile Law ; (ii) Secretarial Practice and Company Law.
- (3) (i) Statistics ; (ii) Trade of India.
- (4) One Group out of the following two Groups :—
 - (a) (i) Currency, Credit and Exchange ; (ii) Economic History.
 - (b) (i) Marketing Practice and Finance ; (ii) Public Finance.

Both the Previous and the Final Examinations for the degree of Bachelor of Commerce shall be conducted wholly by means of papers.

Candidates for the B.Com. degree shall be required to pass the examination in General English of the B.A. standard unless they have taken English as one of their subjects for the B.A. Degree.

Names of successful candidates shall be arranged in three divisions :—

First Division 60 per cent, Second Division 48 per cent, and
Third Division 36 per cent.

In order to pass candidates must obtain 33 per cent of the total marks in each section.

A candidate for the B.Com. Final class will not be allowed to take up Actuarial Science unless he has passed the Previous Examination with Actuarial Mathematics as one of his subjects.

Students of the Previous and Final classes will not be permitted to proceed to their respective University examinations if the Dean of the Faculty considers their conduct or Tutorial or Terminal examination records to be unsatisfactory.

Master of Commerce (M.Com.)

The degree of Master of Commerce shall be conferred on Graduates in Commerce who have pursued a regular course of study in the University for not less than two academic years.

Admission to the M.Com. course shall be restricted to B.Com.'s of the Lucknow University or of the Allahabad University or of the Agra University or of the Calcutta University or of the Punjab University or of the Banaras Hindu University or of the Nagpur University or of the Madras University or of the Patna University or of the Andhra University or of the Rajputana University or of the Gauhati University or of the Jammu and Kashmir University.

The examination shall consist of two parts, Parts I and II.

A student after completing a regular course of study for not less than one academic year shall be admitted to the M.Com. Part I Examination of the year.

M.Com. Part II Examination shall be open to all students who have since passing Part I Examination prosecuted a regular course of study for not less than one academic year.

Divisions shall be awarded on the combined results of the examinations in Parts I and II.

The examination for the degree of Master of Commerce shall be by means of papers provided that a thesis may be offered in lieu of one of the papers in M.Com. Part II Examination with the approval of the Head of the Department.

Candidates shall also be required to undergo a *viva voce* test in the M.Com. Part II Examination.

The M.Com. Examination will comprise of the following papers:—

Part I

1. Accounting Problems and Practice or Advanced Actuarial Practice or Banking Problems and Practice.

2. Any three of the following papers:—

- (i) Advanced Transport.
- (ii) Labour Management and Industrial Relations.
- (iii) Applied Statistics.
- (iv) International Trade and Foreign Exchange.
- (v) Monetary Economics.

Part II

Any four of the following papers:—

- (i) Commercial Development and Industrial Organisation from 1850 onward.
- (ii) Organisation and Finance of Major Industries in India.
- (iii) Organisation, Finance and Regulation of International Commerce.
- (iv) Business Administration.
- (v) Business Economics.

Names of successful candidates shall be arranged in three divisions:—

First Division 60 per cent, Second Division 48 per cent, Third Division 36 per cent.

DOCTOR OF PHILOSOPHY

Candidates for the degree of Doctor of Philosophy shall be required to have carried on research work under the supervision of the University for six terms.

Candidates for the degree of Ph.D. shall have taken the Master's degree in Commerce of this University or of any other approved University.

The dissertation submitted for the degree of Ph.D. shall be on some branch of one of the following subjects :—

Commerce : Accounting, Industries and Regional Resources, Commercial and Industrial Organisation, Co-operation, Marketing, Insurance, and Business Administration.

Applied Economics : Money, Banking, Stock Exchange, Public Finance, Statistics, Trade and Commerce—Internal and External, and Transport.

TABLE OF EXAMINATION FEES

Arts and Science

	Rs.
B.A. Part I	25
B.Sc. (Preliminary)	20
B.A. and B.Sc. (Pass)*	30
B.A. and B.Sc. (Honours)*	55
Provided that a student who holds a Pass Degree and wishes to take an Honours Degree or a student who has passed the examination of one Honours School and wishes to appear in the examination of another Honours School shall pay an examination fee of	20
M.A. and M.Sc.	50
Master in Education	50
M.A. and M.Sc. Part I Previous	30
M.A. and M.Sc. Part II Final	30
Diploma in Psychology	20
Diploma in Public Administration	30
Ph.D., D.Litt. and D.Sc.	200
Re-examination in B.A. and B.Sc. Honours subject	20
Re-examination in each subsidiary subject	10
Re-examination in each subsidiary subject (after passing in the examination in the Principal subject)	15
Pre-Medical Examination	30

*A fee of Rs. 10 to be charged from a candidate who has to appear in General or Special English only or in one subject only under Ordinance 2 (iii) under Master of Arts for Pass Graduates.

Full examination fee to be charged from students who appear in one subject only, under the compartmental system.

Medicine

				Rs.
First M.B., B.S.	..	..	..	25
Final M.B., B.S., Part I	..	..	..	55
Do. Part II	..	..	..	50
Re-examination in Final M.B., B.S.	..	..	..	50
Re-examination in one subject of Final M.B., B.S.	..	..	..	30
1st year B.D.S.	..	..	..	25
2nd year B.D.S.	..	..	..	50
3rd year B.D.S.	..	..	..	50
4th year B.D.S.	..	..	..	30
Re-examination fee for each class will also be the same.				
Re-examination in one subject of 2nd, 3rd and 4th year B.D.S.	..	..	..	30
M.D.	..	..	..	200
M.S.	..	..	..	200
D.P.H. (each Part)	..	..	..	100
Diploma in Medical Radiology and Electricity (each Part)	..	..	..	100
Diploma in Laryngology and Otology (each Part)	..	..	..	100
Diploma in Gynaecology and Obstetrics (for Part I)	..	..	..	100
Do. (for Part II)	..	..	..	100
Diploma in Tuberculosis Diseases (each Part)	..	..	..	100
Diploma in Clinical Pathology	..	..	..	150
Diploma in Orthopaedic Surgery (each Part)	..	..	..	100
Do. (for Part II)	..	..	..	200

Medicine (Ancient and Modern)—B.M.B.S.

Pre. Ayurvedic Test	..	..	..	30
First B.M.B.S.	..	..	..	25
Final B.M.B.S. (Part I)	..	..	..	55
Do. (Part II)	..	..	..	50
Re-examination in Final B.M.B.S.	..	..	..	50
Re-examination in one subject of Final B.M.B.S.	..	..	..	30

Law

LL.B. Previous	..	..	..	30
LL.B. Final	..	..	..	40
LL.M. Part I	..	..	..	50
LL.M. Part II	..	..	..	50
LL.D.	..	..	..	200

<i>Commerce</i>				Rs.
B.Com. Previous	..	..	..	20
B.Com. Final†	..	..	..	30
M.Com. Part I	..	..	..	30
M.Com. Part II	..	..	..	30
Ph.D.	..	..	..	200
Special Paper in Accountancy	..	..	..	10

*Diploma Examinations**In Arabic and Persian :*

Maulvi and Dabir	..	..	..	4
Alim and Dabir-i-Mahir	..	..	..	8
Fazil and Dabir-i-Kamil	..	..	..	10

Bachelor of Examination :

For the full examination	..	..	..	30
Re-examination in each subject	..	..	..	10

In Sanskrit :

Shastri	..	..	..	8
Acharya	..	..	..	10

Note—Before appearing in Part I of the Shastri or Acharya examination a candidate must deposit the fee for the whole examination,† i.e., Rs. 8 or Rs. 10 respectively.

Certificate of Proficiency in French or German or Russian .. 10

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†For examination fee to be charged from students who appear in one section only under the compartmental system. A fee of Rs. 10 to be charged from a candidate who has appeared in General or Special English only.

‡A fee of Rs. 10 will be charged from a candidate who has to reappear in either Part of the Shastri or Acharya Examinations.

MADRAS UNIVERSITY

INTRODUCTORY: CHARACTER OF THE UNIVERSITY

The University of Madras was founded under the Act of Incorporation XXVII of 1857. This Act was in operation until 1904 when as a result of the Commission appointed by the Government of India in 1902 to examine the working of the Universities under that system, the Indian University Act No. VIII of 1904 was passed with the intention of reorganizing the Universities in India and of enlarging their functions in the matters of University Teaching and of supervision over affiliated colleges. This Act again was superseded by the Madras University Act VII of 1923 which was passed to reorganize the University with a view to establishing a teaching and residential University at Madras while enabling the University to continue to exercise due control over the quality of the teaching given by colleges which are to constitute the University or are affiliated to it. This Act has since been amended by the Amending Act XII of 1929, which has since been modified by the Government of India Adaptation of Indian Laws Orders 1937 and 1940 and the amending Acts of 1942 and 1943.

The University is federal in character and is in the main an examining body, though it has undertaken teaching and research in Economics, Indian History, Archaeology, Politics and Public Administration, Philosophy, Psychology, Mathematics, Physics, Geology, Statistics, Geography, Botany, Chemistry, Zoology, Anthropology, Architecture, Commerce and Business Management, Technology, as well as in Sanskrit, Hindi, Islamic and Dravidian Languages, in Indian Music and Constitutional and International Law.

There are 22 constituent colleges, i.e., colleges within the University area, in addition to the Alagappa Chettiar College of Technology, Guindy, maintained by the University, besides, the Y.M.C.A. College of Physical Education, Saidapet, an institution approved by the University in the Diploma Course in Physical Education. Of these, 13 prepare candidates for the Pre-University and or for Degree courses in Arts, Science or Commerce, 4 in Teaching, 1 in Law, 2 in Medicine, 1 in Engineering, 1 in Veterinary Science. There are 65 affiliated colleges of which 47 prepare candidates for the Pre-University and/or for Degree courses in Arts and Science or Commerce, 2 in Medicine, 4 in Engineering, 11 in Teaching, and 1 in Agriculture, besides the Alagappa Chettiar College of Physical Education, Karaikudi, which is approved by the University in the Diploma Course in Physical Education. One of these Medical Colleges is recognised in the Degree Course in Nursing.

Provision is also made to confer degrees and titles in **Oriental Learning**. There are 21 institutions preparing candidates for **Oriental Titles**, including one institution approved in the **Sangita Siromani Course**.

In addition, there are 16 Arts and Science Colleges and 5 **Oriental Colleges** located in the erst-while Travancore-Cochin area, in the South Kanara district, and in Coorg, which are affiliated only in the **Senior Classes**.

OFFICERS AND STAFF OF THE UNIVERSITY

Chancellor :

Shri Bishnuram Medhi, M.A., B.L., Governor of Madras.

Pro-Chancellor :

Sri C. Subramaniam, B.A., B.L., M.L.A.

Vice-Chancellor :

Lt.-Col. Sir A. Lakshmanaswami Mudaliar, B.A., M.D., LL D ,
D.Sc., D.C.L., D.Litt., F.R.C.O.G., F.A.C.S., M.L.C.

Registrar :

Sri R. Ravi Varma, M.A. (Lond.).

Deputy Registrar :

Capt. D. Sivasubramania Mudaliar, L.R.C.P., F.R.C.S.

Assistant Registrar :

Sri P. S. Vaidyanathan, B.A., D.Com.

Presidents of Faculties :

Arts	..	..	..	Sri R. Krishnamurti, M.A.
Science	..	..	..	Dr. S. G. Manavala Ramanujam, M.A., Ph.D., D.I.C., F.R.M.S., F.R.Sc.
Law	..	..	..	Sri M. Anantanarayanan, B.A. (Hons.), I.C.S.
Medicine	..	..	..	Dr. R. G. Krishnan, F.R.C.S.
Engineering	..	..	..	Sri G. R. Damodaran, B.Sc. (Elec.), B.Sc. (Mech.) (Durham), M.I.I.E. (Lond.), M.I.E. (Ind), M.L.C.
Teaching	..	..	..	Sri K. R. Appalachariar, M.A., L.T.
Agriculture	..	..	..	Vacant.
Veterinary Science	..	..	..	Sri Bertie A. D'Souza, B.V.Sc., G.M.V.C.
Technology	..	..	..	Dr. G. S. Laddha, B.Sc. (Tech.), M.S., Ph.D.
Commerce	..	..	..	Sri P. D. Swaminatha Mudaliar, B.A.
Oriental Learning	..	..	..	Sri T. M. Narayanaswami Pillai, M.A., B.L., M.L.C.
Fine Arts	..	..	..	Sri P. Sambamurti, B.A., B.L.

LIST OF TEACHERS IN THE UNIVERSITY

*Department of Economics***Professor :**

Dr. R. Balakrishna, M.A., Ph.D. (Lond.) (Appointed 9th October, 1944—Professor 3rd December, 1946.)

Reader :

Dr. D. Bright Singh, M.A., Ph.D.

Lecturer :

Sri B. Krishna Rao, B.A. (Hon.), M.Litt. (Appointed on 6-1-58).

Lecturer-cum-Research Assistant :

Srimathi M. Gajalakshmi, M.A., M.Litt. (Appointed 31-12-'57 after-noon).

Computer :

Sri C. S. Raman, M.Sc. (from 3-2-58).

Department of Co-operative Banking and Agricultural Finance

Reader :

Dr. K. V. Sri Ram, B.A. (Hons.), Ph.D. (Appointed 22nd August, 1957).

Research Assistants :

Statistics : Kumari M. N. Doraisamy, M.A., (from 9-4-'58).

Economics : Sri R. Srinivasan, M.A., B.L., (from 7-4-'58).

*Department of Indian History and Archaeology***Professor :**

Dr. K. Kanakasabhapathy Pillai, M.A., D. Phil. (Oxon), D. Litt. (Appointed 11th September, 1954).

Ag. Professor of Archaeology :

Dr. T. V. Mahalingam, M.A., D.Litt. (Appointed 22nd August, 1947—Ag. Professor 1st July, 1956).

Reader :

Dr. M. Arokiaswami, M.A., Ph.D. (Appointed 2nd July 1948—Reader 1st April, 1955).

*Department of Politics and Public Administration***Professor :**

Sri R. Bhaskaran, M.A. (Appointed 15th September, 1947—Professor 1st January, 1957).

Lecturer :

Sri C. Arunachalaperumal, M.A., LL.B., D.F. A. & D. (Appointed 12th December, 1957).

Lecturer-cum-Research Assistant :

Sri G. V. Balachandran, M.A. (Appointed 9-12-1957).

*Department of Geography***Professor :**

Dr. George Kuriyan, B.A., B.Sc., Ph.D. (Lond.) (Appointed 20th July, 1932—Professor 24th October, 1949).

Reader :

Vacant.

*Department of Philosophy***Professor :**

Dr. T. M. P. Mahadevan, M.A., Ph.D. (Appointed 15th September, 1943—Professor 1st July, 1953)

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Lecturer :

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(i) Dr. T. E. Shanmugam, M.A., M.Litt., Ph.D. (Appointed 13th October 1950—Reader 1st January 1957.)

(ii) Vacant.

Lecturer :

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Dr. E. C. Mathew, B.Sc. (Tech.), Ph.D., Central Leather Research Institute, Adyar, Madras-20.

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- The Rev. D. Mary Stephane, M.A., B.T., Principal, St. Ignatius Training College for Women, Palayamkottai.**
- Sri K. Kulaindaivelu, M.A., B.T., Principal, Sri R. M. V. Teachers' College, Sri Ramakrishna Mission Vidyalaya Post, Periyanaickenpalayam (Coimbatore Dt.).**
- Sri S. Palanisami, M.A., L.T., Principal, Government Training College, Pudukottai.**
- Sri S. Krishnan, M.A., L.T., Principal, Vivekananda Training College, Thirupparoythurai (Tiruchirapalli Dt.).**
- Sri K. R. Appalachariar, M.A., L.T., Principal, V. O. Chidambaram Training College, Tuticorin.**
- Sri S. V. Chitti Babu, M.A., B.T., Principal, Government Training College, Vellore (N. Arcot Dt.).**
- Sri K. C. Naik, B.Ag., M.Sc., Ph.D. (Bristol), Principal, Agricultural College, Lawley Road P.O., Coimbatore.**
- Sri Bertie A. D'Souza, B.V.Sc., Principal, Madras Veterinary College, Vepery, Madras-7.**

CONSTITUTION OF THE UNIVERSITY

The principal authorities of the University are the Senate which consists of 275 members, the Syndicate which consists of 19 members, the Academic Council which consists of 388 members, the Standing Committee of the Academic Council which consists of 9 members, and the several Faculties, Boards of Studies and such other authorities as may be declared by the Statutes to be authorities of the University.

The Senate is the Supreme Governing Body of the University and the Syndicate is the Executive Body. The Academic Council is the Academic Authority of the University and deals with the general regulation of teaching and examination within the University.

Statement of the number of candidates who appeared for and passed the examinations and the number that qualified for the Degrees, Titles, Certificates and Diplomas of the University during the year 1957 :—

Examination.	No. Examined		No. Passed		No. qualified for Degree or title or Diploma or Certificate	
	Mar./July	Sep./Dec.	Mar./July	Sep./Dec.	March	Sep.
ARTS AND SCIENCE :						
Matriculation	1,536		337		337	..
Pre-University	15,777	5,891	8,552	2,237	8,552	2,126
Intermediate	16,841	8,223	9,283	3,517	9,283	2,637
B.A.—Part I	5,265	2,511	2,922	1,325	..	..
B.A.—Part II	4,797	725	4,242	556	2,655	1,373
B.A.—Part III	5,524	1,366	3,704	575	..	..

* Details of number of candidates for the whole examination and under each Part :

	Appeared.		Passed.	
	Mar.	Sep.	Mar.	Sep.
Whole Examination	.. 15,777	2,339	.. .. 8,552	399
			Part I	.. 2,264 741
			Part II	.. 1,380 1,456
			Part III	.. 233
Part I	..	1,798	..	1,168
Part II	..	1,794	..	1,572
Part III	..	1,754	..	956

Examination	No Examined		No Passed		No. qualified for Degree or title or Diploma or Certificate		
	Mar./July	Sep./Dec.	Mar./July	Sep./Dec.	March	Sep.	
B.Sc.—Part I	..	2,125	828	1,381	494	..	..
B.Sc.—Part II	..	2,281	753	1,237	285	1,210	310
B.A. (Hons.) -Preliminary		516	78	441	68	..	..
B.A. (Hons.) Final	..	460	..	433 + 25*		433 + 25	..
M.A.	..	339	..	230		230	..
M.A. in Science Subjects		46	.	33	.	33	..
B.Sc. (Hons.)—Part I	..	109	12	95	11	.	..
B.Sc. (Hons.)—Part II (Main)	..	113	..	112	..	112	..
B.Sc. (Hons.)—Part II (Subsy.)	..	93	4	89	4	..	..
M.Sc. (by Examination)		38	..	36	..	36	..
B.Mus.—Part I	..	5	3	2	3	..	..
Parts II & III	..	3	..	3	..	3	..

* Recommended for the respective Pass Degree.

Examination	No. Examined		No. Passed		No. qualified for Degree or Diploma	
	Jan./July	Sep./Dec.	Jan./July	Sep./Dec.	Jan./July	Sep./Dec.
TEACHING :						
B.T.—Written	..	1,376	226	1,140	158	} 1,127
Practical	..	1,220	38	1,212	37	
M.Ed.	..	23	.	17		17 ..
LAW :						
F.L.	..	828	265	387	118	387 118
B.L.	..	699	253	371	159	371 159
M.L.	.	31	.	3	..	3 ..
MEDICINE :						
I M.B. & B.S. (N.R.)	..	203	414	143	209	143 209
II M.B. & B.S. (O.R.)						
Part I	..	4	3	2	1	.. ..
Part II	..	39	15	19	10	19 10
Do. (N.R.)	..	262	245	139	164	139 164
Final M.B. & B.S.—						
N.R.—Part I	..	131	147	122	139	. ..
Part II	..	128	220	59	121	59 121
O.R.—Part I	..	76	36	57	26	. ..
Part II	..	222	142	109	57	109 57
M.D.	..	61	..	4	..	4 ..
M.S.	..	47	..	5	..	5 ..
M.Sc.—Anatomy	..	3	1	1	1	1 1
„ Physiology	..	2	..	2	..	2 ..
„ Pharmacology	1	..	1	.. 1

Examination	No. Examined		No Passed		No. qualified for Degree or Diploma		
	Jan./July	Sep /Dec.	Jan./July	Sep /Dec.	Jan /July	Sep /Dec.	
MEDICINE—(contd.)							
D.G.O.	..	21	23	15	16	15	16
D.O.	..	4	3	3	3	3	3
D.L.O.—Part I	..	3	1	3	1		..
„ Part II	..	1	5	1	3	1	3
D.V.	..	3	2	3	2	3	2
D.M.R.—Part I	4	..	4		..
„ Part II	..	7		5		5	
B. Pharmacy :							
Preliminary	..	19	13	5	9	5	9
Final—Part I	..	9	8	4	4	..	5
Final—Part II	..	13	7	9	6	9	6
First B.D.S.	..	21	14	6	13	6	13
Second B.D.S.	..	13	14	10	8	10	8
Third B.D.S.	..	7	7	6	3	6	3
Final B.D.S.	..	4	4	3	3	3	3
Intermediate—Nursing	..	17	3	14	3	14	3
B.Sc.—Nursing	..	13	2	11	1	11	1
Tuberculosis	..	12	..	7	..	7	..
B.S.Sc.—Part I	..	4	..	4	..	..	..
„ Part II	..	5	2	3	2	3	2

Examination	No. Examined		No. Passed		No. qualified for Degree or Diploma	
	Jan /July	Sep /Dec.	Jan./July	Sep /Dec.	Jan /July	Sep. Dec.
TECHNOLOGY :						
B.Sc. (Tech.)—Part I	69		47			..
.. Part II	52	..	40	..	40	..
M.Sc. (Tech.)		2	..	1		1
Ph.D. (Tech.)		1	..	1		1
ENGINEERING :						
First B.E.	652	346	301	226	301	226
Second B.E.	478	246	227	157	227	157
Third B.E.	464	281	230	168	230	168
Final B.E.	509	217	301	151	301	151
Additional Branches	6	..	4	..	4	..
M.Sc.	28	..	25		25	..
AGRICULTURE :						
First Examination	154	66	87	65	87	55
Second Examination	107	41	67	39	67	39
Final Examination	92	22	72	17	72	17
M.Sc.	2	..	1	..	1	..
(result of one candidate yet to be announced)						
VETERINARY SCIENCE :						
B.V.Sc.						
Preliminary	129	67	56	47	56	47
Intermediate—Part I	95	62	31	46	31	46
Intermediate—Part II	77	40	37	37	37	37
Final	88	45	43	35	43	35
M.Sc. (Pathology)	1	..	1	..	1	..

Examination	No. Examined		No. Passed		No. qualified for Degree or Diploma	
	Jan./July	Sep./Dec.	Jan./July	Sep./Dec.	Jan./July	Sep./Dec.
CERTIFICATE						
EXAMINATIONS :						
French	..	31	..	26	..	28
German	..	32	..	23	..	23
Anthropology	..	3	..	3	..	3
Librarianship	..	18	..	17	..	17
DIPLOMA						
EXAMINATIONS :						
French	..	9	..	9	..	9
German	..	12	..	11	..	11
Journalism	..	11	..	4	..	4
Librarianship	..	24	..	24	..	24
Anthropology	..	5	..	5	..	5
Indian Music	..	8	..	7	..	7
Physical Education	..	55	..	53	..	53
Economics
Politics	..	10	..	6	..	6
Statistics	..	13	..	7	..	7
Social Service	..	86	..	67	..	67
Horticulture	..	27	..	27	..	27
BUSINESS						
MANAGEMENT :						
Part I	..	29	..	17	..	..
Part II	..	15	..	13	..	..

Examination	No. Examined		No. Passed		No. qualified for Degree or Title or Diploma or Certificate		
	Mar.	Sep.	Mar.	Sep.	March	Sep.	
ORIENTAL TITLES :							
Preliminary ..	810	..	553	..	..	..	..
Final .	661	..	455	..	..	..	..
Entrance Test to Oriental Title Course ..	677	..	414	..	..	..	..
Entrance Test to Intermediate—Group-D ..	41	..	14	..	..	..	..
Sangita Siromani Prelim. .	2	..	2	..	..	..	..

RESOURCES OF THE UNIVERSITY

	1957-58.
	Rs.
Government Grants ..	10,98,336
Fees ..	19,34,400
Other sources ..	17,73,637
Interest of Endowments ..	39,447
Total ..	48,45,820

SCHOLARSHIPS AND MEDALS

There are a large number of endowed Scholarships, Medals and Prizes and Lectures etc. (numbering 180) awarded by the University with reference to accepted terms for proficiency in the several examinations.

LIBRARY, MUSEUMS, ETC.

The University has a library, the affairs of which are managed by the Syndicate. It has an annual income of about Rs. 81,660 towards its upkeep and maintenance.

The University has up-to-date about 1,51,151 volumes in its main Library and 37,151 volumes in the sectional libraries, besides maps, paper and palm leaf manuscripts.

The University also started an Extension Library at Madurai.

PROVISION FOR RESEARCH

University Studentships and Fellowships for research work are awarded in different subjects, the value of which ranges from Rs. 80 per month to Rs. 250 per month. Such Studentships have been awarded for research in Philosophy, Psychology, History, Economics, Politics and Public Administration, Mathematics, Statistics, Chemistry, Physics, Botany, Zoology, Anthropology, Geology, Physiology, Law, Teaching, Engineering, Medicine, Agriculture, Geography, Sanskrit, Hindi, Tamil, Telugu, Kannada, Malayalam, Urdu and Indian Music.

PUBLICATION AND RESEARCH WORK

The University generally undertakes the publication of the results of research, lectures and other theses.

EXTENSION WORK

The University arranges for a number of University Readerships, Lectures, Endowment Lectures, Vacation Lectures and certain Special Lectures.

University Extension Boards, constituted at Trichinopoly, Ernakulam Coimbatore, Tirunelveli, Kozhikode, Karaikudi, Virudhunagar and Tuticorin and such other centres as may be fixed from time to time, arrange special extension and popular lectures for the benefit of the public.

Vacation lectures for the benefit of teachers are conducted annually at important centres.

Besides, there are about a dozen endowments made specifically for the purpose of inviting experts to deliver courses of lectures on topics connected with Medicine, Engineering, Agriculture, Politics, Constitutional Law, Indian Philosophy, Aesthetics Ancient Indian Culture, History, Economics and Sanskrit.

MILITARY TRAINING

The NCC at present consists of 3 battalions, the First Battalion at Madras, the Second Battalion at Tiruchirapalli and the Fourth at Coimbatore and 12 companies viz., Tambaram Indep. Coy., Tambaram, the 6th Madras Medical Coy., Madras, the 3rd Madras Engineering Platoon,

Guindy, the 2nd Madras EME, Guindy, the 9th Madras EME Sec., Karaikudi, the 10th Madras EME Sec., Coimbatore, the 5th Madras Battery, Madras, the 3rd Madras Air Squadron, Madras, the first Madras Girls' Troop, Madras, the Tirunelveli Indep. Coy., Tirunelveli, the Karaikudi Indep. Coy. and the Salem Indep. Coy., Salem.

The strength in December 1957 was 63 officers and 3,016 cadets.

BUDGET : PROVIDENT FUND

The Budget Estimate of the University for each year (April to March) is placed before the Senate for its consideration and adoption at its Annual Meeting in March of every year.

A Provident Fund has been instituted for the benefit of the permanent teachers and servants (other than the menial establishment) of the University with effect from April 1929, to which the members subscribe 6-1/3 per cent of their monthly salary in the case of persons drawing above Rs. 3 and 8-1/3 per cent in other cases and the University pays an equal contribution.

Provision for a pension *cum* provident fund for the University servants in the superior services entertained before 1st October 1952 has been made. Besides one-fourth pension, there is a provident fund to which the University contributes 6½ per cent and the subscriber an amount not less than 6½ per cent but not exceeding 12½ per cent of his pay. University servants recruited after the 1st October 1952 shall in addition insure their lives for a minimum amount fixed by the Laws based on their salaries.

WOMEN'S EDUCATION

There are 20 constituent and affiliated colleges for the education of women under Arts and Teaching Faculties, recognized or affiliated up to the degree standard, and recognised in the Faculty of Teaching. Women students are also admitted in other colleges.

STUDENTS' INFORMATION BUREAU, AND ITS ACTIVITIES

The Students' Advisory Committee has been replaced by the University Students' Information Bureau.

The main functions of the Bureau are:—

- (1) To furnish information and advice to Indians proceeding to foreign countries for further studies.
- (2) To circulate to colleges and other institutions in India the educational, financial and social information collected by the Bureau.
- (3) To communicate with the Central Bureau on behalf of students before they start.

PROVISION FOR SAFEGUARDING HEALTH, MEDICAL INSPECTION, ETC.

Provision has been made in the Regulations for inspection by qualified Medical Officers of students in the Pre-University and in the first year of the Degree classes and for introduction of compulsory Physical Education in the Pre-University, Pre-Professional and I year of the 3-year degree course.

UNIVERSITY COURSES OF STUDIES, DEGREES AND EXAMINATIONS

Degrees, Titles and Diplomas.—The University offers the Degree of B.A. (Pass), M.A., B.Sc., M.Sc. (Home Science), M.Sc., M.Com., M. Litt. Ph.D., D.Litt., D.Sc. The Professional Degrees are B.T., M.Ed., B.L., M.L., LL.D., M.B. & B.S., M.D., M.S., B.S.Sc., B.Pharm., B.D.S., B.Sc. (Nursing), B.E., M.Sc., in Engineering, B.Sc. (Agriculture), B.V.Sc., B.Sc. (Tech.) B.Com., B.Arch., M.V.Sc. Holders of Professional Degrees have also been made eligible for the Research Degrees. There are also Diplomas in Economics, in Politics and Public Administration, in Statistics, in Modern European Languages (French and German), in Geography, in Indian Music, in Librarianship, in Anthropology, in Journalism, in Physical Education in Analytical Chemistry, in Horticulture, in Social Service, in Business Management and in Archaeology.

Certificate courses in French, German, Anthropology and Librarianship are also conducted side by side with the Diploma courses.

The following Diplomas have been instituted in the Faculty of Medicine :—

Diploma.—In Midwifery (D.G.O.), Ophthalmology (D.O.), Otorhinolaryngology (D.L.O.), Radiology, Venereology, Dermatology, Orthopaedics, and Tuberculosis (T.D.D.). Child Health (D.C.H.), Anaesthesia, Clinical Pathology.

A Diploma in Co-operation has also been instituted, but the course thereof has not been opened. Under Oriental Studies, the Degrees and titles conferred are B.O.L. and Siromani, Vidvan, Munshi-i-Fazil, Afzal-ul-Ulama, Adib-i-Fazil, Tabib-i-Kamil. Afzal-ul-Atibba, Malpan and Soppar. Under Fine Arts, Title conferred is Sangita Siromani.

ADMISSION TO COURSES OF STUDY IN THE UNIVERSITY

Candidates for admission to the University should have passed the S.S.L.C. Examination of a recognized Board and declared eligible for University Courses or the Matriculation Examination of this or of any other recognized University.

For the purpose of admission to courses of study in this University, the Examinations of other Indian Universities and of duly constituted

Boards of Secondary and Intermediate Education and Degree Examinations of other Indian Universities will be recognized as equivalent to the corresponding examinations of this University, subject to the following conditions :—

- (1) That the normal length of the course prescribed leading to the examination sought to be recognized shall not be less than that for the corresponding examination of this University ;
- (2) that the course of study for the examination sought to be recognized shall have been pursued in a University or in a college recognized by the University, provided that it shall be competent for the Syndicate in special cases to waive the above condition ; and
- (3) that in the case of admission to a professional course the restriction of subjects, if any, imposed on candidates of this University shall be applicable to candidates who have passed examinations of other Universities or Bodies.

COURSES OF STUDIES, DEGREES AND EXAMINATIONS

1. PRE-UNIVERSITY COURSE

ORDINANCES

The Pre-University course will be conducted in constituent or affiliated Colleges of the University of Madras.

Qualification for Admission to the course :

Admission to the Pre-University course shall be open to candidates who

- (i-a) have passed the Matriculation Examination of this University or of any other Indian University, accepted by the Syndicate ; or
- (i-b) have passed a qualifying examination of a University or of any duly constituted authority outside India accepted by the Syndicate as equivalent to the Matriculation Examination of this University ; or
- (ii-a) have completed the S. S. L. Certificate issued by the Government of Madras or the E.S.L. Certificate issued under the orders of the Government of Madras ;
- (ii-b) and have been declared eligible for admission to the Pre-University course of study by this University ;
- (iii) have passed an examination conducted by any University, Board of Secondary Education or other duly constituted authority of any State in India accepted by the Syndicate as equivalent to the Matriculation examination of this University :

Provided, however that persons who have appeared for the Entrance Test to Group-D, prior to introduction of these ordinances and qualified in such examination shall be admitted to the Pre-University course of study for a period of five years, i.e. till the academic year 1960-61.

Duration of the Course :

The course of study shall extend over a period of one academic year.

Course of Study :

The course shall consist of three parts :

PART I

English

PART II

Any one of the following languages :

- (a) Regional Language : Tamil.
- (b) An Indian Language : Telugu, Kannada, Malayalam, Urdu, Marathi, Oriya, Hindi, Bengali and Gujarati.
- (c) Classical Language : Sanskrit, Arabic, Persian, Greek, Latin, Hebrew and Syriac.
- (d) Foreign Language : French, German, Burmese and Sinhalese.

PART III

Optional subjects.—(These shall be divided into two groups) :

GROUP A. 1. Mathematics.

2. Physical Sciences with Basic Mathematics.

3. Natural Science.

GROUP B. 1. World History.

2. Geography.

3. Elements of Commerce.

4. Any one of the following subjects in Fine Arts :

(a) Drawing & Painting.

(b) Music.

5. Household Arts.

6. Logic or Psychology.

7. An Advanced course in a Language or a third language.

Every candidate shall take at least two subjects from Group A and two subjects from Group B.

Provided that, candidates who have offered bifurcated courses of study for the S.S.L.C. Examination of the Madras State and have not taken Mathematics as one of the subjects and been declared eligible and candidates who have passed the Entrance

Test to Intermediate Group-D examination of this University be permitted to choose any one subject under Group-A, and any three subjects under Group-B of Part III of the Pre-University course and that this transitory provision be in force for a period of four years from the commencement of the Pre-University course, that is, till the end of the year 1960.

Portions to be prescribed in English shall be as follows :

Paper I : about 600 lines of Poetry and 125 pages of Prose.

Paper II : Two books for Non-detailed study, one of which may be a novel (abridged or retold) and the other a book of short stories, or adventure, or biography, or a collection of one-act plays.

In Paper II, the candidates shall be expected to write two essays, the topics being selected from each one of the Non-detailed texts prescribed. There shall also be (i) a precis and (ii) a question on the correct use of idioms.

Portions prescribed in the languages will consist of Poetry, Drama, Prose and Non-detailed texts in accordance with the syllabus and text-books which may be prescribed from time to time.

The subjects under Part III shall be taught according to the syllabus prescribed. Where practical exercises are prescribed, a certificate to the effect that the candidate has performed the practical work or experiments prescribed and has satisfactorily undergone a test conducted by the college in the prescribed practical work will be required.

Examination Appearances :

A candidate appearing for the examination on the first occasion shall apply for all the three Parts of the examination. At subsequent appearances, the candidate shall appear for any part of the examination in which he has not already secured pass marks.

Passing Minimum :

A candidate shall be declared to have passed the Pre-University examination, if he obtains

- (1) not less than 40 per cent in Part I—English ;
- (2) not less than 40 per cent in Part II—Selected \ Second Language ; and
- (3) not less than 35 per cent in each of the four subjects selected from Groups A and B of Part III.

A candidate may pass the whole examination by passing in the three Parts at the same time, at the same examination or at different examinations. A candidate shall be declared to have passed in any Part on obtaining in that Part the minimum marks prescribed for each of the subjects.

Classification of successful candidates :

Candidates who pass in the three Parts of the examination at the same time and who obtain not less than 60 per cent of the total marks, shall be placed in the first class; those who obtain less than 60 per cent but not less than 50 per cent shall be placed in the second class and all the other successful candidates shall be placed in the third class.

Candidates who pass the whole examination at the first appearance and obtain 75 per cent or above in any of the subjects shall be deemed to have passed with distinction in the particular subject.

Candidates who pass the examination in more than one sitting but obtain 75 per cent or above in any of the subject will have the Symbol 'D' denoting distinction recorded against the subject with a note that they have completed the examination at more than one sitting.

Symbolic representation of marks :

No details of the marks will be made available, but the class obtained and the symbolic representation of the grade will be indicated against each subject in the certificate granted to the candidate

Symbol A will denote 60 per cent and above of the marks :

„ B „ 50 „ „ „ but
below 60
per cent :

„ C „ 40 per cent and above in Part I and Part II ;
and

35 per cent and above in each of the subjects
in Part III but below 50 per cent.

„ D „ distinction as having obtained 75 per cent
and above in any of the subjects provided the candidate passes the whole
examination at the first appearance.

If the candidate passes the whole examination at more than one sitting and obtains 75 per cent and above in any one of the subjects, the Symbol 'D' will be shown against the subject or subjects, together with a note that he passed at more than one sitting.

Symbol F will denote Failure.

Appearance for Additional Subject :

A candidate who has passed the Pre-University examination shall be permitted to appear again for the examination in a new subject or subjects under Part III provided he has undergone the course of study

prescribed in the subject or subjects selected after joining a college for one academic year. He shall be declared to have passed the examination, if he obtains not less than 35 per cent of the marks in each new subject.

Consequent on the introduction of Pre-University course, the Intermediate course has been abolished. Provision has however been made for failed candidates to appear for Intermediate examination for a period of five years.

2. DEGREES OF BACHELOR OF ARTS AND BACHELOR OF SCIENCE (B.A. AND B.Sc.) (THREE-YEAR DEGREE COURSE).

REGULATIONS.

(To take effect from the academic year 1957-58.)

Candidates for the Degree of Bachelor of Arts or Bachelor of Science Examination shall be required to have passed the Pre-University Examination of this University or an examination accepted by the Syndicate as equivalent thereto and to have subsequently undergone a prescribed course of study in a constituent or affiliated college of this University for a period of not less than three academic years or nine terms.

Course of study :

The course of study shall comprise the following subjects according to a syllabus to be prescribed from time to time.

The course shall be common for the Bachelor of Arts and Bachelor of Science Degrees in Parts I and II.

PART I—ENGLISH

The course shall comprise—

- (a) The study in detail of certain prescribed books.

The books prescribed for detailed study shall consist of the following :—

- (i) Shakespeare—2 plays.
- (ii) Modern Poetry—2,000 lines.
- (iii) Modern Prose—2 Texts.

(b) *Composition*.—The study of two non-detailed texts and general composition including essays on general themes, precis-writing and paraphrase.

NOTE.—The papers set in English, Part I, shall test the candidate's command of correct English, greater emphasis being placed in valuation upon this aspect of the answers than upon the knowledge of the texts.

The study of the detailed texts prescribed shall extend over a period of two years and candidates shall be examined at the end of the second year on the detailed texts. The study of non-detailed text and General Composition shall be extended to the third year, and candidates shall be examined at the end of the third year on Composition.

PART II—A SECOND LANGUAGE

The course shall comprise the study of any one of the following Classical or Modern (Indian or Foreign) languages at the option of the candidate according to the syllabus and text-books prescribed from time to time :—

Classical :

Sanskrit, Greek, Latin, Arabic, Persian, Hebrew and Syriac.

Modern :

(1) *Indian*—Tamil, Telugu, Kannada, Malayalam, Urdu, Marathi, Oriya, Hindi, Gujarati and Bengali.

(2) *Foreign*—French, German, Burmese and Sinhalese.

PART III—OPTIONAL SUBJECTS

The optional subjects shall consist of two Groups—Group A and Group B. Group A shall consist of the main subject, or group of subjects, while Group B shall comprise the study of an ancillary subject or subjects appropriate to the main subject of study.

Optional Subjects—B.A. Degree.—The following shall be the optional subjects for those taking the Bachelor of Arts Degree :

Group A—Main.

Branch I—History.

Branch II—Politics.

Branch III—Social Sciences.

Branch IV—Economics.

Branch V—Geography.

Branch VI—Philosophy.

Branch VII—Psychology.

Branch VIII—Indian Music.

Branch IX—Western Music.

Branch X—Drawing and Painting.

Branch XI—History of Fine Arts.

Branch XII—Language.

Group B—Ancillary.

Any two of the subjects appropriate to the main subject of study prescribed from the following shall be offered by the candidates. **This**

will not apply to Branch III and to certain of the languages under Branch XII :—

- (1) Politics.
- (2) Economics.
- (3) Philosophy.
- (4) Geography.
- (5) History of Fine Arts.
- (6) Indian Music.
- (7) Western Music.
- (8) Psychology.
- (9) Commerce.
- (10) Statistics.
- (11) History.
- (12) Anthropology.
- (13) Sociology.
- (14) Languages.

Optional subjects—B.Sc. Degree.—The following shall be the optional subjects for those taking the Bachelor of Science Degree :—

Group A—Main.

- Branch I—Mathematics.
- Branch II—Statistics.
- Branch III—Physics.
- Branch IV—Chemistry.
- Branch V—Botany.
- Branch VI—Zoology.
- Branch VII—Geology.
- Branch VIII—Geography.
- Branch IX—Physiology.

Group B—Ancillary.

Any one of the following subjects shall be taken, the subject depending upon the main subject chosen :—

- (1) Statistics.
- (2) Physics.
- (3) Numerical Mathematics.
- (4) Mathematical Economics.
- (5) Biology.
- (6) Educational Psychology.
- (7) Mathematics.
- (8) Composite Course in Mathematics and Chemistry.
- (9) Chemistry.
- (10) Geology.
- (11) Composite Course in Mathematics and Physics.
- (12) Botany.
- (13) Zoology.

- (14) Physiology.
- (15) Composite Ancillary Course for Zoology.
- (16) Anthropology.
- (17) Archaeology.
- (18) Geography.
- (19) Astronomy.
- (20) Genetics.

PART IV—MINOR.

B.Sc.—Minor subjects.—A candidate for the Degree of Bachelor of Arts shall offer any two subjects according to a syllabus prescribed from out of the following subjects:—

- (1) Physics.
- (2) Chemistry.
- (3) Biology.
- (4) Astronomy.
- (5) Statistics.
- (6) Geology.
- (7) Physical Geography.
- (8) Physical Anthropology.
- (9) Physiology.

B.S.—Minor subjects.—A candidate for the Degree of Bachelor of Science shall be required to offer any two subjects according to a syllabus prescribed out of the following:—

- (1) History.
- (2) Politics.
- (3) Economics.
- (4) Commerce.
- (5) Geography.
- (6) Psychology.
- (7) Philosophy.
- (8) History of Fine Arts.
- (9) History of Music—Indian.
- (10) History of Music—Western.

Conditions of eligibility of a candidate for the Degree :

No candidate shall be declared eligible for the Degree of Bachelor of Arts or Bachelor of Science unless he has completed the course of study prescribed and passed the examinations in the several subjects contained in the course of study as detailed in the Regulations aforesaid.

A candidate shall not be declared eligible for the Degree of Bachelor of Arts or Bachelor of Science unless he has passed the examination

in English under Part I, in the selected language under Part II, in the selected Optional group under Part III and the examination in Minor under Part IV.

Marks for a pass :

A candidate for the Degree of Bachelor of Arts or Bachelor of Science shall be declared to have passed—

(1) in Part I of the examination, if he obtains not less than 35 per cent of the marks in each of the first and second parts of the examination constituting Part I;

(2) in Part II of the examination, if he obtains not less than 35 per cent of the marks in each of the first and second parts of the examination constituting Part II;

(3) in Part III of the examination, if he obtains not less than 35 per cent of the marks in each of the subjects or in each subdivision of Group A, where specified, and 35 per cent of the marks in Group B and

(4) in Part IV of the examination, if he obtains not less than 35 per cent of the marks.

Classification of successful candidates.

Candidates who obtain 60 per cent or above of the total marks in any one of the Parts I, II and III shall be placed in the first class in that Part. Successful candidates who obtain less than 60 per cent but not less than 50 per cent of the marks in any of the Parts I, II and III shall be placed in the Second Class. All other successful candidates in Parts I, II and III shall be placed in the third class. A candidate securing not less than 75 per cent of the marks in any of the I, II or III Part of the examination shall be declared to have passed with distinction. There will be no classification for Part IV—Minor.

Symbolic representation shall be adopted in declaring the results and a statement of detailed marks shall not be furnished—

Symbol A will denote 60 per cent and above of the marks.

Symbol B will denote 50 per cent and above but below 60 per cent.

Symbol C will denote 35 per cent and above but below 50 per cent.

Symbol D will denote distinction as having obtained 75 per cent and above in any one of the subjects; provided the candidate passes the whole examination at one sitting.

Symbol F will denote failure.

Transitory Provision.

Candidates who pass the Intermediate Examination shall be eligible to be admitted to the second year of the three-year Degree course.

This Transitory Regulation shall be in force for a period of five years after the introduction of the three-year Degree course.

3. DEGREE OF BACHELOR OF SCIENCE IN HOME SCIENCE (B.Sc. HOME SCIENCE.)

(To take effect from the Academic Year, 1957-58.)

Candidates for the Degree of Bachelor of Science (Home Science) shall be required to have passed the Pre-University Examination of this University or an examination accepted by the Syndicate as equivalent thereto and to have subsequently undergone a prescribed course of study in a Constituent or Affiliated college of this University for a period of not less than three academic years or nine terms.

Course of study—

The course of study shall comprise the following subjects according to syllabuses to be prescribed from time to time.

PART I

English

The course of study shall extend over a period of three years, the third year being devoted to the training of students in communications including radio talks, public speaking, etc., for which no examination will be held. The examination will cover the textbooks prescribed and will be held at the end of the second academic year.

PART II

A Second Language

The course shall comprise the study of any one of the following languages. The course of study shall extend over a period of three years, the third year being devoted to the training of students in communications including radio talks, public speaking, etc., for which no examination will be held. The examination will cover the text-books prescribed and will be held at the end of the second academic year.

Classical—Sanskrit, Greek, Latin, Arabic, Persian, Hebrew and Syriac.
Foreign—French, German, Burmese and Sinhalese.

Indian—Tamil, Telugu, Kannada, Malayalam, Urdu, Marathi, Oriya, Hindi, Bengali and Gujarati.

PART III

The course of study shall be as follows :—

Group A

Physical Sciences (Chemistry and Physics).
Physiology and Bacteriology.

Group B

Foods and Nutrition.
Home Management.
Clothing and Textiles.
Child Development and Psychology.
Sociology.

Each candidate shall submit her practical record books containing the record of all her practical work performed during the period of her study. The records shall be countersigned by the Professor under whom the candidate worked to certify them to be *bona fide* records of work performed by the candidate. The record books shall be submitted by the 31st January of the year of appearance to the examiners conducting the examination, and the allotment of marks on the practical record books shall rest with the examiners.

Candidates shall take Group A at the end of the second year and Group B at the end of the third year.

Conditions of eligibility of a candidate for the Degree—

No candidate shall be declared eligible for the Degree of Bachelor of Science in Home Science unless she has completed the course of study prescribed and passed the examinations in the several subjects of the course of study as detailed in the Regulation aforesaid.

A candidate shall not be declared eligible for the Degree of Bachelor of Science in Home Science unless she has passed the examination in English under Part I, in the selected language under Part II, and in the subjects under Part III.

A candidate for the Degree of Bachelor of Science in Home Science shall be declared to have passed—

(i) in Part I of the examination if she obtains not less than 35 per cent of the marks.

A candidate who obtains not less than 60 per cent of the marks in Part I shall be declared to have passed Part I of the examination with distinction.

(ii) in Part II of the examination if she obtains not less than 35 per cent of the marks.

A candidate who obtains not less than 60 per cent of the marks in Part II shall be declared to have passed Part II of the examination with distinction.

(iii) in Part III of the examination if she obtains not less than 35 per cent of the marks in each of the subjects.

Candidates who obtain 60 per cent or above of the total marks in Part III shall be placed in the first class. Successful candidates who obtain less than 60 per cent but not less than 50 per cent of the marks in Part III shall be placed in the second class. All other successful candidates in Part III shall be placed in the third class. There will be no classification for Parts I and II. A candidate securing not less than 75 per cent of the marks in Part III of the examination shall be declared to have passed in that Part with distinction.

Symbolic representation shall be adopted in declaring the results in Part III and a statement of detailed marks shall not be furnished.

Symbol A will denote 60 per cent and above of the marks ;

Symbol B will denote 50 per cent and above ; but below 60 per cent of the marks ;

Symbol C will denote 35 per cent and above ; but below 50 per cent of the marks ;

Symbol D will denote distinction as having obtained 75 per cent and above in Part III ; provided the candidate passes the whole examination at one sitting ;

Symbol F will denote failure.

Candidates who pass the Intermediate Examination shall be eligible to be admitted to the second year of the three-year Degree course.

This Transitory Regulation shall be in force for a period of five years after the introduction of the three-year Degree course.

4. DEGREE OF BACHELOR OF COMMERCE (B. COM.)

(To take effect from the Academic year 1957-58.)

REGULATIONS.

1. Candidates for the Degree of Bachelor of Commerce shall be required—

(a) to have passed the Pre-University examination of this University or an examination accepted by the Syndicate as equivalent thereto, and

(b) to have subsequently undergone the prescribed course of study in a constituent or affiliated college of this University for a period of not less than three academic years or nine terms.

Course of study—

The course of study shall comprise instruction in the following subjects according to syllabuses and text-books to be prescribed from time to time :—

PART I

English.

The course shall extend over a period of two academic years. The course shall cover—

- (1) the study in detail of certain prescribed books in Modern Prose ;
- (2) composition on matter supplied by books set for perusal ;
- (3) precis-writing and business correspondence.

PART II

A Second Language.

The course shall extend over a period of two academic years and shall comprise the study of any one of the following languages at the option of the candidate :—

- | | |
|-------------|------------|
| 1. Foreign— | Foreign— |
| French. | Sinhalese. |
| German. | Burmese. |
| 2. Indian— | Indian— |
| Tamil. | Kannada. |
| Telugu. | Malayalam. |
| | Marathi. |
| | Oriva. |
| | Hindi. |
| | Bengali. |
| | Urdu. |
| | Gujarati. |

(NOTE.—The language taken shall not be the same as that taken for the Pre-University examination.)

The course shall cover Translation from the selected language and *vice versa* and Composition which shall be in the nature of short letters dealing with Commercial correspondence.

(NOTE.—There will be only one paper and no text-books will be prescribed.)

PART III

The course shall extend over a period of three academic years and shall comprise the study of the following:—

Group A

1. General Economics.
2. Modern Economic Developments and Economic Problems of India.

Group B

1. Banking Law and Practice.
2. Business Organization and Secretarial Practice.
3. Mercantile Law.
4. Advanced Accountancy.
5. Auditing.
6. Statistical Methods.

Group C

Any one of the following:—

1. Trade and Transport.
2. Insurance.
3. Rural Economics and Co-operation.
4. Industrial Organization and Cost Accounts.
5. Income-tax Law and Practice.
6. Actuarial Science.
7. Advanced Currency and Banking.
8. Special Accounts and Audit.

Marks required for a Pass in the several parts to qualify for the Degree—

A candidate shall be declared to have passed Part I or Part II of the examination if he obtains not less than 35 per cent of the total marks in each Part. A candidate shall be declared to have passed Part III if he obtains not less than 35 per cent of the marks in each group separately and 40 per cent in the aggregate in Groups B and C together. *Conditions of eligibility for the Degree.—*

No candidate shall be eligible for the Degree of Bachelor of Commerce until he has completed the course of study prescribed and passed the examination in all the parts specified.

There shall be separate lists of successful candidates in each part. Candidates obtaining not less than 60 per cent of the total marks in Part I or Part II shall be declared to have passed that part with distinction.

Successful candidates who pass the examinations at the first appearance and obtain 60 per cent or above of the total marks in Part III (Groups B and C only) shall be placed in the first class in that part. Successful candidates who obtain less than 60 per cent but not less than 50 per cent of the marks in Part III (Groups B and C only) shall be placed in the second class. All other successful candidates in Part III (Groups B and C only) shall be placed in the third class. A candidate securing not less than 75 per cent of the marks in any group under Part III of the examination shall be declared to have passed that group with distinction. There will be no classification for Group A of Part III.

Symbolic representation shall be adopted in declaring the results and a statement of detailed marks shall not be furnished

Symbol A will denote 60 per cent and above of the marks;

Symbol B will denote 50 per cent and above of the marks; but below 60 per cent;

5. DEGREE OF MASTER OF ARTS (M.A.)

(To take effect from the academic year 1958-59)

Conditions of admission to M.A. Degree—

A candidate who has passed the B.A. or the B.Sc. Degree Examination of this University or an examination of some other University accepted by the Syndicate as equivalent thereto shall be permitted to appear and qualify for the M.A. Degree examination of this University after a course of two academic years in a constituent or an affiliated college of this University.

Eligibility for admission—

A candidate to be eligible to pursue a course of study for the M.A. Degree in any subject (other than languages) should have previously

qualified for the Pass Degree with the particular subject in the main standard. A candidate who has offered any language under Part I, Part II or Part III of the B.A. or the B.Sc. Degree may be permitted to pursue a course of study for the M.A. Degree in that language.

Provided that any graduate in Arts or Science shall be eligible to pursue a course of study for the Master's Degree in Branch II — Politics and Public Administration, and in Branch V — Philosophy.

Provided further that a candidate who has passed the M.Ed. Degree Examination with Advanced Educational Psychology as an optional subject shall be eligible to pursue a course of study for the Master's Degree in Branch VI — Psychology.

Branches of study—

The course of study for the Degree shall be in any one of the following branches of knowledge according to a syllabus to be prescribed from time to time:—

Branch I : History.

Branch II : Politics and Public Administration.

Branch III : Economics.

Branch IV : Geography.

Branch V : Philosophy.

Branch VI : Psychology.

Branch VII : Languages.

Eligibility for the Degree—

A candidate shall be declared qualified for the Degree of Master of Arts if he passes Part I and Part II of the examination securing the requisite marks.

A candidate shall be deemed to have passed Part I of the examination for the Degree, if he obtains not less than 40 per cent of the marks in each of the papers or division, as the case may be. A candidate who fails in any subject or in any division shall be required to sit again for the examination in such subject or division along with Part II of the examination.

A candidate shall be deemed to have passed Part II of the examination, if he obtains not less than 40 per cent of the marks in each division or subject of the examination, as the case may be, and 45 per cent of the aggregate marks in Parts I and II taken together.

A candidate for Branch VII — English, shall be declared qualified for the Degree of Master of Arts, if he obtains not less than 45 per cent of the aggregate marks and not less than 40 per cent in each subject of the examination.

Classification of successful candidates—

Candidates who pass the examination for the Degree at the first appearance shall be ranked according to the order of merit. There shall be two classes.

(a) Candidates who secure not less than 60 per cent of the aggregate marks in the whole examination (Parts I & II where such parts exist) shall be declared to have passed the examination in the First Class, provided they pass the examination (Parts I and II wherever prescribed) at the first appearance.

(b) All other successful candidates shall be declared to have passed the examination in the Second Class.

(c) Candidates who obtain 75 per cent of the marks and above in any subject or division shall be deemed to have passed that subject or division with distinction, provided they pass the examination (in Parts I and II wherever prescribed) at the first appearance.

Subsequent appearance—

(a) Candidates who fail in any subject or any division under Part I shall be required to sit for the examination in such subject or division along with Part II of the examination.

(b) Candidates who fail in any subject or any division under Part II of the examination, shall be required to sit again for the examination in all the subjects of the examination under Part II. Credit shall be given to the Pass obtained in Part I of the examination for such subsequent appearance.

Restriction of appearance for the examination.

No candidate shall be permitted to take the examination—under Part II, wherever prescribed, for the M.A. Degree on more than three occasions.

Symbolic Representation of marks—

Symbolic representation shall be adopted in declaring the results and a statement of marks shall not be furnished.

Symbol A will denote 60 per cent and above of the marks.

„ B „ 45 per cent and above but below 60 per cent of the marks.

„ C „ 40 per cent and above but below 45 per cent of the marks.

„ D „ Distinction as having obtained 75 per cent and above in any one of the subject or division ; provided the candidate passes the whole examination (Parts I and II wherever prescribed) at the first appearance.

„ F „ Failure.

M.A.'s to qualify in another Branch—

A candidate who has qualified in one Branch may be permitted to qualify in another Branch after a regular course of study for a period of two years, in a constituent or an affiliated college.

A candidate who has passed the B.A. (Hons.) Degree Examination of this University after a three-year course of study after the Intermediate, shall be permitted to appear for the M.A. Degree Examination in the particular main subject in which he has qualified for the Honours, after putting in a year's course in a constituent or an affiliated college.

Examination once a year—

The examination shall be held once a year.

6. DEGREE OF MASTER OF SCIENCE (M.Sc.)

(To take effect from the academic year 1958-59)

Conditions of admission to M.Sc. Degree—

A candidate who has passed the B.A. Degree in a Science subject or the B.Sc. Degree examination of this University or an examination of some other University accepted by the Syndicate as equivalent thereto shall be permitted to appear and qualify for the M.Sc. Degree Examination of this University after a course of study of two academic years in a constituent or an affiliated college of this University.

Eligibility for admission—

A candidate to be eligible to pursue a course of study for the M.Sc. Degree in any subject should have previously qualified for the Pass Degree with the particular subject in the main standard, provided that in the case of Br. II — Statistics, a candidate who has passed the B.A. Degree or the B.Sc. Degree or the Hons. with Statistics as one of the subjects can be admitted to the M.Sc.

Branches of study—

The course of study for the Degree shall be in any one of the following main branches of knowledge according to a syllabus to be prescribed from time to time:—

- Branch I : Mathematics.
- Branch II : Statistics.
- Branch III : Physics.
- Branch IV : Chemistry.
- Branch V : Botany.
- Branch VI : Zoology.
- Branch VII : Geology.
- Branch VIII : Geography.
- Branch IX : Physiology.

Examinations when held—

There shall be two examinations, one at the end of the first year, viz., Part I and the other at the end of the second year, viz., Part II except in the case of Branch I — Mathematics where the examination will be held at the end of the second year.

The examination for the Degree shall consist of written and practical tests (including *viva voce*) where prescribed. Each candidate shall submit his laboratory note-books containing the record of all his practical work performed during the period of study for the examination. The record shall be countersigned by the Professor under whom the candidate has worked to certify it to be a *bona fide* record of work performed by the candidate. It shall be submitted on the first day of the practical examination to the examiners engaged in conducting the examination.

Classification of successful candidates—

(a) Candidates who pass the examination for the Degree at the first appearance shall be ranked according to the order of merit. There shall be two classes — First and Second.

(b) Candidates who secure not less than sixty per cent of the aggregate marks in the whole examination (Parts I and II where such parts exist) shall be declared to have passed the examination in the First Class, provided they pass the examination (Parts I and II wherever prescribed) at the first appearance.

(c) All other successful candidates shall be declared to have passed the examination in the Second Class.

(d) Candidates who obtain 75 per cent of the marks and above in any subject or division shall be deemed to have passed the subject or division with distinction, provided they pass the examination (Parts I and II wherever prescribed) at the first appearance.

Subsequent appearance—

(a) Candidates who fail in any subject or any division under Part I shall be required to sit again for the examination in such subject or division along with Part II of the examination.

(b) Candidates who fail in any subject or any division under Part II of the examination shall be required to sit again for the examination in all the subjects of the examination under Part II. Credit shall be given to the pass obtained in Part I of the examination for such subsequent appearance.

(c) In the case of Branch I — Mathematics, candidates who fail in any subject or division shall be required to sit for the whole examination.

Restriction of appearance for the examination—

No candidate shall be permitted to take the examination (Part II wherever prescribed) for the M.Sc. Degree on more than three occasions.

Symbolic representation of marks—

Symbolic representation shall be adopted in declaring the result and a statement of marks shall not be furnished :

Symbol A will denote 60 per cent and above of the marks,

" B " 50 per cent and above but below 60 per cent of the marks.

" C " 40 per cent and above but below 50 per cent in the case of Branch I — Mathematics and 45 per cent and above but below 50 per cent of the marks in the case of the other Branches.

" D " Distinction as having obtained 75 per cent and above in any one of the subjects or division : provided the candidate passes the examinations for the Degree at the first appearance.

" F " Failure.

M.Sc.'s to qualify in another Branch—

A candidate who has qualified in one Branch may be permitted to qualify in another Branch after a regular course of study for two years, in a constituent or an affiliated college.

Honours Degree holders to qualify for M.Sc.—

A candidate who has passed the B.Sc. (Hons.) Degree Examination of this University or an examination of any other University recognized as equivalent thereto shall be permitted to appear for the M.Sc. Degree Examination in the particular main subject in which he has qualified for the Honours Degree after putting in a course of study for one year in a constituent or an affiliated college.

Examination once a year—

The examination for the M.Sc. Degree shall be held once a year.

7. DEGREE OF MASTER OF SCIENCE (HOME SCIENCE)

Eligibility—

A candidate may present herself for the Degree of Master of Science in Home Science under the following conditions :—

(i) She should have passed the B.Sc. Degree in Home Science of this University or an examination of any other University accepted by the Syndicate as equivalent thereto : and

(ii) have undergone a course of study extending over a period of two academic years in an institution recognized by or affiliated to the University.

Course of study—

The course shall comprise the study of anyone of the following branches according to the syllabuses prescribed from time to time :—

Branch I: Home Management.

Branch II: Institution Management.

The course of study in each of the branches shall be as follows :—

BRANCH I

Home Management.

- *1 Psychology and Family Organisation.
- *2 Sociology.
- *3 Textiles, Clothing and Laundering.
- *4 Methods of Investigation.
- 5 Family Housing.
- 6 Home Nursing and Bacteriology.
- 7 Theory and Practice in Home Management (including Related Art*).
- 8 Personal and Family Economics.
- 9 Consumer-Buyer Economics.
- 10 Six-weeks practical housekeeping in a cottage each year
- 11 Thesis on some approved topic related to Home Management.

BRANCH II

Institution Management.

- *1 Psychology.
- *2 Sociology.
- *3 Textiles, Clothing and Laundering.
- *4 Methods of Investigation.
- *5 Home Management (Related Art*).
- 6 Business Management.
- 7 Institution Management and Dietetics.
- 8 Three-months' internship in an approved hospital.
- 9 Three-months' internship in an approved institution.
- 10 Thesis or two problem papers on topics relating to experience in internship.

A candidate who offers Branch I — Home Management shall put in six weeks of practical house-keeping in a cottage situated within the college premises at the end of each year before supplicating for the Degree. A candidate for the course in Branch II — Institution Management shall put in a course of three months' internship in an approved institution which may be a canteen, hostel, canteen, etc. In each of these cases, a certificate of satisfactory completion of practical house-keeping or internship shall be produced. After completion of the practical training or internship and within six months of passing the written and practical examinations each candidate shall submit a thesis. The thesis shall be valued by the examiners appointed for the purpose.

A candidate shall be declared to have passed the written examination if she obtains not less than (i) 40 per cent of the total marks

* Syllabuses common.

in the written papers (ii) 40 per cent of the practical (with record note-books) and (iii) 40 per cent of the total marks. She shall be declared to have passed in the thesis if she secures not less than 40 per cent of the marks in the thesis.

A candidate who secures not less than 60 per cent in the aggregate shall be placed in the first class. All other successful candidates shall be placed in the second class.

A candidate who fails in the examination shall be permitted to take the examination on a subsequent occasion without further attendance. A candidate whose thesis is not approved shall be required to work for another term under the direction of a supervisor to be approved by the Syndicate and shall submit a revised thesis on a fresh topic approved by the supervisor. No candidate shall be permitted to submit a thesis or appear for the examination on more than three occasions.

Candidates who pass the examination in one branch may qualify for the M.Sc. Degree in another branch after one year's course of study in an approved institution.

DEGREE OF MASTER OF COMMERCE (M.COM.)

(To take effect from the academic year 1958-59)

Conditions of Admission to M.Com. Degree—

A candidate who has passed the B.Com. Degree Examination of this University or an examination of some other University accepted by the Syndicate as equivalent thereto shall be permitted to appear and qualify for the M.Com. Degree Examination of this University after a course of two academic years in a constituent or an affiliated college of this University.

Course of study—

The course of study shall comprise instruction in the following subjects according to syllabuses and text-books prescribed from time to time :—

1. Economics of Enterprise.
2. Business Administration.
3. Company Law and Industrial Law.
4. International Trade and Foreign Exchange.
5. Any two of the following subjects :
 - (i) Accounts and Auditing.
 - (ii) Taxes on Incomes (with special reference to Indian Income-tax Law and Practice).
 - (iii) Rural Economics and Co-operation.
 - (iv) Public Accounts and Financial Administration.
 - (v) Transport.

- (vi) Statistical methods and their application to Commerce.
- (vii) Advanced Currency and Banking.
- (viii) Marketing and Distribution.
- (ix) Cost Accounts.
- (x) Insurance and Actuarial Science.

Examinations when held—

There shall be two examinations, one at the end of the first year, viz., Part I and the other at the end of the second year, viz., Part II.

Eligibility for the Degree—

(a) A candidate shall be declared qualified for the Degree of Master of Commerce if he passes Part I and Part II of the examination securing the requisite marks.

(b) A candidate shall be deemed to have passed Part I of the examination for the Degree, if he obtains not less than 40 per cent of the marks in each of the Papers. A candidate who fails in any subject shall be required to sit for the examination in such subject or division along with Part II of the Examination.

(c) A candidate shall be deemed to have passed Part II of the examination if he obtains not less than 40 per cent in each subject of the examination and not less than 45 per cent of the aggregate marks in Parts I and II together.

Classification of successful candidate—

(a) Candidates who pass Parts I and II of the examination for the Degree at the first appearance shall be ranked according to the order of merit. There shall be two classes—First and Second.

(b) Candidates who secure not less than sixty per cent of the aggregate marks shall be declared to have passed the examination in the First Class, provided they pass Parts I and II of the examination at the first appearance.

(c) All other successful candidates shall be declared to have passed the examination in the Second Class.

(d) Candidates who obtain 75 per cent of the marks and above in any subject shall be deemed to have passed the subject with distinction, provided they pass Parts I and II of the examination at the first appearance.

Subsequent appearance—

(a) Candidates who fail in any subject under Part I of the examination shall be required to sit again for the examination in such subject along with Part II of the examination.

(b) Candidates who fail in any subject under Part II of the examination shall be required to sit again for the examination in all the subjects they took under Part II. Credit shall be given to the pass obtained in Part I of the examination for such subsequent appearance.

Restriction of appearance—

No candidate shall be permitted to take the examination under Part II for the M.Com. Degree on more than three occasions.

Symbolic Representation of Marks—

Symbolic representation shall be adopted in declaring the results and a statement of marks shall not be furnished :

Symbol A will denote 60 per cent and above of the marks.

„ B „ 50 per cent and above but below 60 per cent of the marks.

„ C „ 40 per cent and above but below 50 per cent of the marks.

„ D „ Distinction as having obtained 75 per cent and above in any one of the subjects; provided the candidate passes the examination for the Degree at the first appearance.

„ F „ Failure.

B.Com. (Hons.) Degree-holders to appear for M.Com.—

A candidate who has passed the B.Com. (Hons.) Degree Examination of this University or an examination of another University recognised as equivalent thereto shall be permitted to appear for the M.Com. Degree Examination after putting in a course of study for one year in a constituent or an affiliated college.

Examination once a year—

The Examination shall be held once a year.

DEGREE OF MASTER OF LETTERS (M. LITT.)

A candidate for the M.Litt. Degree is required to have graduated in an Arts subject, and to work in an Institution recognized by or affiliated to this University under a teacher-previously approved by the Syndicate for a period of two years or one year respectively, in the case of (1) a Bachelor of Arts or Bachelor of Music or Bachelor of Oriental Learning and (2) Bachelor of Arts (Honours), or Master of Arts or Bachelor of Oriental Learning (Honours). Candidates are also required to submit to written and *viva voce* examinations besides the submission of thesis.

Graduates of other Universities are also eligible to submit thesis for the above degree, provided they have resided for two academic year, prior to the date of their application, within the University limits or area, and subject to their satisfying the other conditions laid down.

DEGREE OF DOCTOR OF PHILOSOPHY (Ph.D.)

The Degree of Doctor of Philosophy (Ph.D.) has been introduced as an intermediary research Degree in the Faculties of Arts, Science, Medicine, Engineering, Teaching, Agriculture, Veterinary Science, Technology, Fine Arts and Oriental Learning. A Bachelor of Arts or a Bachelor of Science, or a Bachelor of Music, or a Bachelor of Oriental

Learning of this University or of a University recognised by the Syndicate as equivalent thereto may present himself for the Degree five years after qualifying for the Degree and not earlier than three years after registration. A Bachelor of Arts (Honours), or a Master of Arts, or a Bachelor of Science (Honours), or a Bachelor of Oriental Learning (Honours), or a Bachelor of Medicine and Surgery, or a Bachelor of Engineering, or a Bachelor of Science in Agriculture, or a Bachelor of Veterinary Science, or a Bachelor of Science in Technology may present himself for the Degree not earlier than three years after qualifying for the respective Degree, and not earlier than two years after registration. A Master of Letters, or a Master of Science or a Master of Oriental Learning may present himself for the Degree not earlier than one year after qualifying for the Degree and one year after registration. A Master of Education may present his thesis two years after qualifying for the Degree and not earlier than two years after registration. Candidates of other Universities will not be permitted to submit their thesis without a residential qualification of three years after registering for the Degree. Candidates who have already qualified for the M.Litt. or M.Sc. or M.Ed. Degree are exempted from working under supervision.

A candidate for the Ph.D. Degree who has not previously qualified for the Degree of M.Litt., M.Sc., M.Ed. or M.O.L. shall also be required to submit a written test (Part II) in addition to the submission of thesis (Part 1).

DEGREE OF DOCTOR OF LETTERS (D.LITT.)

A Master of Letters or Master of Oriental Learning or a Doctor of Philosophy of this University may present himself for the Degree of Doctor of Letters (D.Litt.) the highest Degree of this University in the Faculties of Arts, Teaching, Fine Arts and Oriental Learning three years and two years respectively after having qualified for the Degree of M.Litt. or M.O.L. or Ph.D. as the case may be. Ordinarily, the thesis shall be in the form of published papers. Candidates may be required to submit to an oral examination, if the Examiners so desire.

MASTER OF SCIENCE (M.Sc.) (BY RESEARCH)

A candidate for the Degree is required to have graduated in Science and to work in a College or Research Institute under a Professor, or any other person previously approved by the Syndicate, for a period of two years or one year respectively, in the case of (1) Bachelors of Arts and Science, or (2) Bachelor of Arts and Science (Honours) or M.A. or B.E. or B.Sc. (Tech.) or B.Sc. (Ag.) and submit thereafter a thesis for approval. The candidate shall also take Part II of the examination which shall consist of a written, a practical (wherever possible) and *viva voce* examination.

Provision has been separately made for the admission of Graduates in Medicine and Veterinary Science to the M.Sc. Degree.

Provision has been made to recognise on individual merits Research institutes other than those managed by or attached to this University and Institutes or Departments attached to other Universities in cases where there are no facilities for the graduates of this University to conduct research in any Institute within the Madras University area and the Teacher or Officers employed therein for the above purpose.

Graduates of other Universities are also eligible to submit thesis for the above degree, provided they have resided for two academic years, prior to the date of their application, within the University limits or area, and subject to their satisfying the other conditions laid down.

DOCTOR OF SCIENCE (D.Sc.)

This is the highest Degree in Science and is open only to a Master of Science or Doctor of Philosophy of this University. A Master of Science may submit his thesis three years after having qualified for the Degree, and a Ph.D. after a lapse of two years after qualifying for the Degree.

PRE-PROFESSIONAL COURSE

REGULATIONS.

(To take effect from the academic year, 1957-58)

The Pre-Professional course will be conducted in Constituent and Affiliated Colleges of the University recognised for the purpose

Qualification for admission to the course—

Admission to the Pre-Professional course shall be open to candidates who have passed the Pre-University Examination of this University or an Examination accepted as equivalent thereto, and been selected by the Managements of the Colleges for the courses leading to the professions of Medicine, Engineering, Veterinary Science, Agriculture and Technology.

A candidate to be eligible for admission to the Pre-Professional course should—

(a) be completing the minimum age prescribed for admission to the respective professions, before taking up the Professional course ;

(b) have offered under Group A of Part II of the Pre-University Examination, the subjects mentioned against each of the professions :—

- (i) Medicine—Physical Sciences and Natural Science.
- (ii) Veterinary Science—Physical Sciences and Natural Science.
- (iii) Engineering—Mathematics and Physical Sciences.
- (iv) Technology—Mathematics and Physical Sciences.
- (v) Agriculture—Natural Science and Physical Sciences.

The course of study shall extend over a period of one academic year or three terms.

Course of study—

The syllabus and scheme of examination for the different subjects comprised in each of the courses leading to the different professions shall be common.

The course shall consist of two parts :

Part I—

English.

Part II—

- (a) Pre-Medical—Physics, Chemistry, Biology, Statistics (Elementary).
- (b) Pre-Veterinary—Physics, Chemistry, Biology, Statistics (Elementary).
- (c) Pre-Engineering—Mathematics, Physics, Chemistry and Geometrical Drawing.
- (d) Pre-Technological—Mathematics, Physics, Chemistry and Geometrical Drawing.
- (e) Pre-Agricultural—Physics, Chemistry, Biology, Statistics (Elementary).

Passing minima—

A candidate shall be declared to have passed Part I English, if he obtains not less than 40 per cent of the marks. He shall be declared to have passed the examination in Part II, if he obtains not less than 40 per cent in each of the subjects (Theory and Practical taken together).

Classification of successful candidates—

A successful candidate who secures 60 per cent or above of the marks in the aggregate in Part II will be declared to have passed in the First Class, and a successful candidate securing 75 per cent or above of the marks in any subject will be declared to have passed the examination in the subject with distinction. All the other successful candidates will be placed in the Second Class.

A candidate who secures passing marks in any subject or subjects shall be exempted from appearing again for the examination in such subject or subjects.

BACHELOR OF LAWS (B.L.)

Graduates of this or of any other recognised University are admitted to the course of study which extends over two years.

The First Examination in Law, to be held at the end of the first year, includes an examination in Jurisprudence (1 paper), Roman Law (1 paper), the Law of Contracts including Negotiable Instruments and Specific Relief (2 papers), the Law of Torts (1 paper) and Criminal Law (1 paper). Candidates are declared to have passed the examination if they obtain not less than 33-1/3 per cent of the marks in Juris-

prudence and Roman Law taken together, 33-1/3 per cent in Contracts and 33-1/3 per cent in the Law of Torts and Criminal Law taken together, and not less than 40 per cent of the total marks. Those who obtain not less than 60 per cent are placed in the First Class, while those obtaining less than 60 per cent and not less than 50 per cent are placed in the Second Class, the remaining successful candidates in the Third Class.

Provision is made for pass in compartments (Division). A candidate who fails in the whole examination, but obtains not less than 50 per cent of the marks in any Division will be exempted from re-examination in that Division.

The final examination in Law (B.L.) is open to those who have passed the First Examination in Law and have studied for a further period of one year. The subjects of study and the scheme of examination are as follows: Law of Property with special reference to the Transfer of Property Act, the Indian Trusts Act, the Indian Easements Act, and the Succession Act (2 papers), Hindu Law (1 paper), Muhammadan Law (1 paper), International Law of Peace (1 paper), the Law of Evidence (1 paper), and Indian Constitutional Law (1 paper).

The minimum for a pass is one-third of the marks in the Law of Property, one-third of the marks in Hindu and Muhammadan Law taken together, and one-third of the marks in Indian Constitutional Law, International Law of Peace and Evidence, taken together and not less than 40 per cent of the total marks. Those who obtain not less than 60 per cent are placed in the First Class, while those obtaining less than 60 per cent and not less than 50 per cent are placed in the Second Class, the remaining successful candidates in the Third Class.

Provision is made in the Regulations for pass in compartments (Divisions). A candidate failing in the whole examination should obtain 50 per cent of the marks in the Division for a pass in that Division. He will be exempted from re-examination in the subjects included in the Division.

MASTER OF LAWS (M.L.)

No candidate will be admitted to the examination for the M.L. Degree unless he has passed not less than two years previously the examination for the B.L. Degree of this University or any other accepted Degree. Candidates of other Universities are, however, required to have resided within the University limits or area for a period of two academic years prior to the date of the examination and been during the period under the supervision of the Principal or other permanent member of the Law College staff or the Head of the Department of any branch of Law in the University.

Candidates for Constitutional Law and International Law shall be required to undergo a course in the University Department or an insti-

tution recognized for the course provided that candidates who have already appeared for this subject in or prior to 1954 shall be permitted to appear for the Examination in any year without undergoing the course.

One of the following branches may be offered :

Branch I—Jurisprudence.

Branch II—Constitutional Law and International Law

Branch III—Crime and Tort.

Branch IV—Contracts including Mercantile Law.

Branch V—Hindu, Muhammadan and other Personal Laws

Branch VI—Property.

(5 papers in each Branch).

Candidates who obtain not less than one-third of the marks in each paper and not less than 40 per cent on the whole, are declared to have passed the examination. Those who obtain 60 per cent or more of the aggregate are placed in the First Class, those obtaining less than 60 per cent and not less than 50 per cent are placed in the Second Class, the remaining successful candidates in the Third Class.

DOCTOR OF LAWS (LL.D.)

Candidates for this Degree may submit their theses one year after passing the M.L. Degree Examination of this University, and five years after passing the B.L. Degree Examination. There may further be an oral examination.

BACHELOR OF MEDICINE AND SURGERY (M.B. & B.S.)

The course of study extends over a period of five and half years, eight months of which should be spent in the study of the pre-clinical subjects and less than three years in the study of clinical subjects subsequent to passing the First M.B.B.S. examination and not less than 12 months as a student internec subsequent to passing the Final M.B.B.S. Degree examination. Candidates for admission shall have passed the Pre-Professional examination or Intermediate examination in Arts and Science with Physics, Chemistry and Natural Science (Biology) which shall include a practical test in each of these subjects or any other examination accepted by the Syndicate as equivalent thereto.

The subjects of study and the scheme of examination for the First M.B.B.S. course are Anatomy and Physiology including Biochemistry. The examination in each subject is written, practical and oral.

The subjects of study and the scheme of examination for the second M.B.B.S. course are General Pathology with Bacteriology, Pharmacology including Pharmaco-Therapeutics and Forensic Medicine. The examination in each of the subjects, Pathology and Pharmacology shall consist

of a written paper, a practical examination and oral examination including the examination of autopsy record and in Forensic Medicine a written paper and an oral examination.

The course of study for the Final M.B.B.S. Degree examination shall extend over three years subsequent to the First M.B.B.S. examination which shall be spent at recognised hospitals. The scheme of examination is as follows: Part I: Ophthalmology and Part II: (1) Medicine including Pediatrics and Therapeutics and Applied Pathology; (2) Surgery including Orthopaedics, Ear, Nose, Throat and Applied Pathology; (3) Obstetrics and Gynaecology including Applied Pathology; (4) Preventive and Social Medicine. Part I shall consist of a written paper, clinical examination and oral examination; Part II—Medicine and Surgery—each subject consists of two written papers, a clinical examination and an oral examination; in the case of Surgery alone an examination in operative surgery and surgical pathology; in the case of Obstetrics and Gynaecology one written paper, a clinical examination and an oral examination including questions on specimens and appliances; in the case of preventive and Social Medicine one written paper and an oral examination.

A candidate will be declared to have passed the examination if he obtains not less than one half of the marks. Those who obtain seventy per cent of the aggregate are placed in the First Class. Those who pass in First Class and obtain seventy-five per cent of the marks are declared to have passed with distinction in that subject.

Candidates, who have passed the entire examination, will have prior to their admission to the Degree to put in internship under recognised Medical Officer in institutions recognised by the University. Three months of the period shall be spent in Public Health work preferably in rural areas and nine months in Medical and Surgical wards or in Medical and Obstetric and Gynaecological wards by rotation of a period of three months in each. Such candidates shall before the award of the Degree produce a certificate of satisfactory completion of the student-internship.

DOCTOR OF MEDICINE

The subjects of study and the scheme of examination are as follows:—

The Degree is open to:

(1) M.B. & B.S. Degree holders who have been engaged continuously for five years in the active practice of Medicine; or

(2) M.B. & B.S. Degree holders who have been House Surgeons in Teaching Hospitals recognised by or affiliated to the University for a period of one year, of which six months at least have been spent in the medical wards or been in the active practice of the profession for three years, and have held for a period of two years an appointment on the

Medical Side or in the Special Department concerned, as House Physician, Clinical Assistant or any similar appointment in a Teaching Hospital or Institute recognised by or affiliated to the University.

Branch I.—Medicine: Medicine including Pathology and Mental Diseases (2 papers), Tropical Medicine (1 paper), and a Clinical and Oral Examination including an examination of pathological specimens.

Branch II.—Midwifery including Diseases of the new born: Medicine (1 paper), Midwifery and Diseases of the new born, including the pathology of these subjects (2 paper), an Essay on one or two set subjects in Midwifery (1 paper), and a clinical and oral examination including an examination of pathological specimens, radiograms etc.

Branch III—A.—Pathology (Main) and Bacteriology (Subsidiary): Medicine (1 paper), Pathology (2 papers), Bacteriology (1 paper), a practical and oral examination in advanced Pathology, and a practical examination in Bacteriology.

Branch III—B.—Bacteriology (Main) and Pathology (Subsidiary): Medicine (1 paper), Bacteriology (2 papers), Pathology (1 paper), a practical and oral examination in advanced Bacteriology, and a practical examination in Pathology.

Branch IV—Physiology (Main) and Bio-Chemistry (Subsidiary): Medicine (1 paper), Physiology including Bio-Chemistry (2 papers), a practical and an oral examination in Advanced Physiology.

Branch V—Pharmacology: Medicine (1 paper), Pharmacology including therapeutics (2 papers), a practical and oral examination in Advanced Pharmacology.

Candidates for the M. D. Degree in a speciality should have passed the Diploma Examination in that speciality.

Candidates are permitted to qualify in more than one Branch.

MASTER OF SURGERY

The conditions of admission to the examination are in the main identical with those prescribed for the M.D. Degree, with the difference that candidates should have specialised in Surgery in the practice of their profession, and the appointments held should have been on the surgical side.

The following Branches are offered—

Branch I.—General Surgery: Surgery (2 papers), Surgical Pathology and Anatomy (1 paper), Clinical Examination, Operative Surgery and the use of instruments, and oral examination including slides, pathological specimens, X-Ray plates, etc.

Branch II.—Special Subjects: Candidates may offer any one of the following special subjects:—

(a) Oto-Rhino-Laryngology, (b) Ophthalmology, (c) Orthopaedics. (d) Gynaecology. Candidates offering any of the specialities shall be examined in—

(i) Surgery (common paper) (1 paper). (ii) Special Subject, including Anatomy and Surgical Pathology of the Speciality (2 papers). (iii) A Clinical Examination in Surgery. (iv) A Clinical Examination in the Special Subject. (v) Practical and Oral examination in the special subject including an examination of pathological specimens, slides, X-Rays, use of special instruments and operations.

As in the case of the M.D. Degree, candidates of other Universities are also eligible for the Degree under certain conditions, and provision has been made for qualifying in more than one Branch.

Higher Specialities.—There shall be an M.S. Degree in the higher specialised branches of—

- (i) Thoracic Surgery
- (ii) Neuro-surgery
- (iii) Plastic Surgery

Candidates wishing to qualify in any of these highly specialised branches of Surgery should have qualified for the M.S. in General Surgery and thereafter should have put in a period of two years in the speciality concerned in a hospital approved for this purpose. The examination shall consist of—

- (i) A written paper; and
- (ii) A clinical, practical and oral examinations.

POST-GRADUATE DIPLOMAS IN MEDICINE AND SURGERY

Diplomas have been instituted in the following subjects, and candidates who have passed the M.B. & B.S. Degree Examination of this University or an equivalent examination of another University are eligible for admission to the course therefor :—

1. Diploma in Gynaecology and Obstetrics.
2. Diploma in Venereology.
3. Diploma in Dermatology.
4. Diploma in Ophthalmology.
5. Diploma in Oto-Rhino-Laryngology.
6. Diploma in Radiology.
7. Diploma in Orthopaedics.
8. Diploma in Tuberculosis.
9. Diploma in Child Health.
10. Diploma in Anaesthesia.
11. Diploma in Clinical Pathology.

The course for each Diploma extends over a period of 12 months in a special hospital or the special wards of a General Hospital dealing

with the particular speciality, and candidates for admission to the course should, after passing the M.B. & B.S. Degree Examination, have held a House appointment for a period of one year in a recognised hospital attached to a teaching institution of this University or of any other University accepted as equivalent thereto, or produce evidence of having been in practice for three years.

The examination for each of the Diplomas consists of written, clinical, oral and, or practical tests.

BACHELOR OF SANITARY SCIENCE

Candidates must be graduates in Medicine and Surgery of this University or hold corresponding degrees of other Universities or Licensing Bodies recognised for the purpose and the degree must be registered with the Madras Medical Council before the candidate is admitted to the examination. The course of study extends over a period of not less than twelve calendar months. The subjects of study and the scheme of examination are as follows :

Part I.—(1) Chemistry and Physics in relation to Public Health, Climatology and Meteorology, (2) Bacteriology, (3) Medical Entomology and Parasitology. The examination in each subject includes a written paper, practical examination and a *viva voce*. Candidates who obtain not less than one-half of the aggregate marks in each subject in Part I of the examination shall be declared to have passed the examination.

Part II.—(1) Hygiene and Preventive Medicine and Public Health including Sanitary Engineering, (2) Epidemiology and Infectious Diseases, (3) Sanitary Law and Vital Statistics, (4) Public Health Administration. The examination in subjects (1) and (3) includes a written paper and a *viva voce*; that in (2) includes a written paper, a practical examination and a *viva voce*, and that in (4) consists of a practical examination only. Those who get not less than one half of the aggregate marks in each subject in Part II of the examination shall be declared to have passed the examination.

Candidates who pass both parts of the examination at the first sitting and who obtain not less than two-thirds of the aggregate marks of both the parts together shall be declared to have passed in the First Class; and those obtaining less than two-third of the aggregate marks and not less than 50 per cent of the total marks shall be declared to have passed the examination in the Second Class. Candidates obtaining not less than 75 per cent of the marks in any subject shall be declared to have passed with distinction in that subject.

BACHELOR OF PHARMACY: B. PHARM.

Candidates seeking admission to the course should have passed the Pre-Professional examination or Intermediate Examination of this or

some other University with certain prescribed subjects. The course extends over a period of three academic years or nine terms, and there will be a Preliminary Examination at the end of the First year and a Final Examination consisting of two Parts: Part I to be taken at the end of the second year and Part II at the end of the third year. The subjects for the examination will be as follows:—

Preliminary: At the end of the first academic year in General Chemistry, Pharmaceutical Botany and Elementary Zoology, and General Physiology (written, practical and oral in each).

Final:

Part I.—At the end of the second academic year in Organic Chemistry and Pharmacology (Written, Practical and Oral in each).

Part II.—At the end of the the third academic year in Pharmacognocny, Pharmaceutical Chemistry, and Pharmaceutics including Forensic Pharmacy and Bacteriology (Written, Practical and Oral).

Candidates for the Preliminary Examination will be declared to have passed the examination, if they obtain not less than one-half of the marks in the practical part and not less than one-half of the marks in the written and oral parts taken together.

A candidate for the Final examination shall be declared to have passed Part I of the examination if he obtains not less than one-half of the marks in the practical part and not less than one-half of the marks in the written and oral parts taken together in Organic Chemistry and Pharmacology.

A candidate shall be declared to have passed Part II of the examination if he obtains not less than one-half of the marks in the written and oral examinations taken together in each of the subjects, Pharmacognocny, Pharmaceutical Chemistry and Pharmaceutics, and not less than one-half of the marks in the practical examination in each of these subjects.

BACHELOR OF SCIENCE IN NURSING

Candidates for admission to the course should have completed the age of seventeen on or before the date of admission to the course, passed the Matriculation Examination of this University or of any other Indian University, or the equivalent examination of any University outside India, or should have been declared eligible for admission to a course of study in this University on the results of the S.S.L.C. Examination held by the Government of Madras, or any other equivalent examination. They should also have been enrolled as Nurse-Pupils and performed the routine duties of a hospital as pupil nurse during the whole period of study in a Hospital affiliated to a medical college and recognised for this purpose.

The course consists of two parts, one the Intermediate Examination in Science in Nursing, extending over 2 academic years, and the other the B.Sc. Degree Examination in Nursing extending over two academic years.

Intermediate.—The Examination comprises three parts: Part I—English (3 papers); Part II—Chemistry and Physics, Psychology, Anatomy and Physiology, Microbiology, and Nutrition and Diet Therapy, (one paper each); and Part III—Nursing and Allied Arts (1 paper), Medical and Surgical Nursing Pharmacology and Therapeutics (1 paper), and Practical Examination.

Candidates shall be declared to have passed the examination if they obtain not less than 35 per cent of the marks in Part I English, 35 per cent of the marks in each of the subjects in Part II and 40 per cent in the aggregate and 40 per cent of the marks in each of the subjects in Part III and 50 per cent in the aggregate.

The B.Sc. (Nursing) Degree Examination comprises three parts, Part I—English or Tamil, Telugu, Kannada, Malayalam or Urdu (1 paper); Part II—Hygiene and Preventive Medicine, Professional Opportunities and Adjustments, World History and History of Nursing; and Sociology (1 paper each); Part III—General (1 paper), Nursing of Children and Gynaecological Nursing (1 paper), Ear, Nose and Throat (1 paper), Practical Advanced Nursing, and Records (2 Nursing care studies and one health teaching study).

A candidate shall be declared to have passed Part I of the examination if he obtains not less than 35 per cent of the total marks in that Part. He shall be declared to have passed Part II if he obtains not less than 35 per cent of marks in each subject and 40 per cent in the aggregate. He shall be declared to have passed Part III if he obtains not less than 40 per cent of the marks in each subject and 50 per cent in the aggregate.

BACHELOR OF DENTAL SURGERY

The course for the Degree of Bachelor of Dental Surgery extends over a period of four academic years and is open to candidates who have passed the Pre-Professional examination or Intermediate examination with Physics, Chemistry and Natural Science or an equivalent examination of a recognised University.

There are four examinations to be passed. The first examination will be held at the end of the first academic year. The scheme of examination is as follows:

- (1) Anatomy (written, practical and oral) (2) Physiology (written, practical and oral) and (3) Dental Metallurgy (written).

The course for the second examination extends over a period of one academic year. The course consists of lectures and practical or clinical work in all the subjects. The scheme of examination is as follows :

- (1) General and Dental Materia Medica, (2) General Pathology and Bacteriology, (3) Human and Comparative Dental Anatomy and Physiology and Dental Histology.

Candidates for the third year B.D.S. examination should undergo a course of instruction for one academic year. The examination consists of written, practical, clinical and oral examinations in the following subjects :

- (1) Medicine (2) Surgery and (3) Dental Surgery and Pathology with Dental Bacteriology.

The course for the final B.D.S. Degree examination extends over a period of one year. The scheme of examination is as follows :

- (1) Dental Prosthesis and Teeth Carving including Crown and Bridge Prosthesis (written, oral, practical and clinical), (2) Dental Jurisprudence and Ethics (written), (3) Operative Dentistry and Dental Radiology and Children's Dentistry (written, oral and practical and clinical), (4) Oral Surgery and Orthodontia (written, oral, practical and clinical).

Candidates obtaining not less than 50 per cent of the marks in the written and oral parts taken together will be declared to have passed the examination. Candidates obtaining 70 per cent of the aggregate marks will be placed in the first class.

Provision has also been made for the M.B.B.S. Degree holders to attend the course, which in their case, extends over two years.

BACHELOR OF INDIAN MEDICINE

No College is offering instruction for the course.

ENGINEERING

BACHELOR OF ENGINEERING

Candidates for the Degree shall be required to have passed the Pre-Professional examination or Intermediate Examination in Arts and Science in this University with Physics, Chemistry and Mathematics as optional subjects, or an examination in some other University accepted as equivalent thereto.

The course extends over four academic years.

The scheme of examination and the subjects for study are as follows :

FIRST B.E. EXAMINATION

*Part I (Written) :—*Mathematics I, Physics, Chemistry, Applied Mechanics I, Civil Engineering I, Geometrical Drawing.

*Part II (Practical) :—*Physics, Chemistry, Workshops.

SECOND B.E. EXAMINATION

*Part I (Written) :—*Mathematics II, Electrical Engineering, Mechanical Engineering, Machine Drawing and Design, Applied Mechanics II, Civil Engineering II, Surveying or General Textile Technology, Building Drawing.

*Part II (Practical) :—*Strength of Materials, Surveying or Textile Technology, Electrical Engineering, Laboratory Workshops.

THIRD B.E. EXAMINATION

Civil Branch

*Part I (Written) :—*Mathematics III, Strength of Materials and Theory of Structures I, Hydraulics I, Structural Engineering I, Railway and Highway Engineering, Geology.

*Part II (Practical) :—*Strength of Materials, Hydraulics, Surveying, Geology, Workshops.

Mechanical Branch

*Part I (Written) :—*Mathematics III, Strength of Materials and Theory of Structures I, Hydraulics I, Structural Engineering I or Auto-Engineering, Heat Engines I, Electrical Technology I.

*Part II (Practical) :—*Strength of Materials Hydraulics, Electrical Engineering, Mechanical Engineering, Workshops.

Electrical Branch

*Part I (Written) :—*Mathematics III, Strength of Materials and Theory of Structures I, Hydraulics I, Heat Engines I, Theory and Calculation of Electrical Apparatus I, Design and Drawing I.

*Part II (Practical) :—*Strength of Materials, Hydraulics, Electrical Engineering, Mechanical Engineering, Workshops.

Tele-communication Branch

*Part I (Written) :—*Mathematics III, Strength of Materials and Theory of Structures I, Engineering Electronics I, Heat Engines I, Electrical Technology I, Design and Drawing I.

*Part II (Practical) :—*Strength of Materials, Electrical Engineering, Radio Engineering, Mechanical Engineering, Workshops.

Highway Branch

Same as for Civil Branch.

Aeronautical Branch

*Part I (Written) :—*Mathematics III, Strength of Materials and Theory of Structures I, Hydraulics I, Applied Mechanics III and Simple Theory of Flight, Airplane Structures, Aircraft Engines and Control Systems.

*Part II (Practical) :—*Strength of Materials, Hydraulics, Construction of Airplane Parts, Instrument—Testing and Calibration, Workshops.

Automotive Branch

Part I (Written):—Mathematics III, Strength of Materials and Theory of Structures I, Hydraulics I, Heat Engines I, Automotive Engines I, Automotive Engineering Design Practice.

Part II (Practical):—Strength of Materials, Hydraulics, Mechanical Engineering, Automotive Engineering, Workshops.

Textile Branch

Part I (Written):—Textile Technology II, Preparation and Spinning I, Preparation and Weaving I, Fabric Structure and Designing I, Industrial Organization and Economics, Textile Chemistry (General).

Part II (Practical):—Textile Technology, Spinning, Weaving, Textile Chemistry.

Mining and Metallurgy Branch

Part I (Written):—Mathematics, Applied Mechanics and Hydraulics, Mechanical Engineering I (Heat Engines I), Electrical Technology I, Geology, Surveying, Mining and Metallurgy I.

Part II (Practical):—Hydraulics, Geology, Surveying, Metallurgy.

FINAL B.E. DEGREE EXAMINATION

Civil Branch

Part I (Written):—Strength of Materials and Theory of Structures II, Structural Engineering II, Hydraulics and Hydraulic Machinery II (Civil), Design and Drawing I, Surveying, Irrigation, Docks, and Harbours, Sanitary Engineering, Design and Drawing II.

Part II (Practical):—Strength of Materials, Hydraulics, Surveying, Design and Drawing (*viva voce*).

Mechanical Branch

Part I (Written):—Heat Engines II, Electrical Technology II, Theory of Machines, Hydraulics and Hydraulic Machinery II, (Mechanical and Electrical) or Aero-Engineering; Fuels, Gas Plant and Boilers, Workshop Practice and Machine Tools, Design and Drawing, Engineering Economics.

Part II (Practical):—Mechanical Engineering, Electrical Engineering, Hydraulics Workshops, Design and Drawing (*viva voce*).

Electrical Branch

Part I (Written):—Heat Engines II, Electrical Theory and Measurements, Theory and Calculation of Electrical Apparatus II, Hydraulics and Hydraulic Machinery II (Mechanical and Electrical), Generation and Utilization, Transmission and Distribution, Design, Estimate and Drawing of Electric Supply Systems, Design and Drawing II.

Part II (Practical):—Electrical Engineering, Mechanical Engineering, Hydraulics, Workshops.

Tele-communication Branch

Part I (Written):—Engineering Electronics II, High Frequency Measurements, Electrical Technology II, Transmission Circuits, Broadcasting (Reception) I, Broadcasting (Transmission) II, Wire Communication I (Telegraphy), Wire Communication II (Telephony).

Part II (Practical):—Electrical Engineering Workshops, Radio Engineering, Telegraphy and Telephony Laboratory, Design and Drawing (*viva voce*).

Highway Branch

Part I (Written):—Strength of Materials and Theory of Structures II, Bridge Engineering, Bridge Design and Drawing, Geology and Chemistry of Road Materials, Surveying, Highway Engineering I, Highway Engineering II, Highway Design and Drawing.

Part II (Practical):—Strength of Materials, Highway Engineering, Surveying, Design and Drawing (*viva voce*) Geology and Chemistry.

Aeronautical Branch

Part I (Written):—Fluid Mechanics, Technical Aerodynamics, Air Navigation, Meteorology, Airplane Design, Aircraft Stress Analysis, Design Practice and Production Planning.

Part II (Practical):—Aircraft Drafting and Design (*viva voce*), Testing of Airplane Structures, Model Testing and Performance Reduction and Workshops.

Automotive Branch

Part I (Written):—Automotive Engines II, Chassis and its components, Theory of Machines, Metallurgy and Materials of Construction and Specifications, Fuels, Gas Plant and Heat Transmission, Workshop Practice and Machine Tools, Chassis Design Practice, Engineering Economics and Motor Vehicles Trade Laws and Acts, Workshop Practice II, Design and Drawing.

Part II (Practical):—Automotive Engineering, Workshops (Automotive), Workshops (General), Design and Drawing (*viva voce*).

Textile Branch

Part I (Written):—Preparation and Spinning II, Preparation and Weaving II, Fabric Structure and Designing II, Cloth Analysis and Costing of Yarn and Cloth, Textile Engineering, Mill Planning and Organization, and Economics of Cotton Industry and Trade.

Part II (Practical):—Spinning, Weaving, Fabric Structure, Cloth Analysis.

Mining and Metallurgy Branch

Part I (Written):—Mechanical Engineering II, Electrical Technology II, Mining Geology, Mineral Dressing, Mining II, Mining III, Economics of Mining.

Part II (Practical) :—Mechanical Engineering, Mining Geology, Mineral Dressing.

Candidates may present themselves for the First, Second, Third and Final B.E. Examinations after undergoing the prescribed courses of study for each of the examinations for a period of one academic year in a Constituent or Affiliated College. Candidates may also present themselves simultaneously for (i) the First and Second B.E. Examinations, and (ii) the Third and Final B.E. Examinations.

Percentage of marks required for a pass.—(a) Candidates appearing only for the First or the Second B.E. Examination and obtaining not less than 35 per cent in each of the subjects of Part I, 45 per cent in each of the subjects of Part II and 40 per cent in the aggregate of Parts I and II, shall be declared to have passed the examination in which they appear.

(b) Candidates appearing for the First and the Second B.E. Examinations together or for a portion thereof, and obtaining not less than 35 per cent in each of the subjects of Part I, 45 per cent in each of the subjects of Part II and 40 per cent in the aggregate for the First and the Second B.E. Examinations shall be declared to have passed these examinations. Regulation (a) above will, however, be applicable to candidates who fail in the two examinations taken together.

(c) Candidates appearing only for the Third or the Final B.E. Examination and obtaining not less than 40 per cent in each of the subjects of Part I, 50 per cent in each of the subjects of Part II and 50 per cent in the aggregate of Parts I and II, shall be declared to have passed the examination in which they appear.

(d) Candidates appearing for the Third and the Final B.E. Examinations together, or for a portion thereof, and obtaining not less than 40 per cent in each of the subjects of Part I, 50 per cent in each of the subjects of Part II and 50 per cent of the aggregate of the Third and the Final B.E. Examinations, shall be declared to have passed these examinations. Regulation (c) above will, however, be applicable to candidates who fail to pass the two examinations together.

Passing minimum.—No candidate will be admitted to the B.E. Degree unless he has passed both the Practical Test and the Written Examination.

DEGREE OF MASTER OF SCIENCE IN ENGINEERING

(M.Sc. IN ENGINEERING)

Candidates for the Degree of Master of Science (M.Sc.) in Engineering shall be required

(a) to have passed the B.E. Degree Examination of this University or of some other University accepted as equivalent thereto; and have taken the specified subject or branch leading to the higher degree;

(b) to have undergone the course of study for M.Sc. in the selected branch in a Constituent or an Affiliated College of Engineering or other Institutions approved by the University according to Regulation 2 *infra*; and

(c) to have passed the prescribed examination in the selected branch.

The course of studies and the branches in which a candidate can qualify are as follows.

A. Public Health Engineering

(i) Candidates for this branch shall be required to have passed the B.E. Degree Examination in Civil Engineering.

(ii) The course of study shall extend over a period of one academic year, covering the following subjects:—

1. Advanced Water-Supply and Purification.
2. Advanced Sewerage and Sewage Disposal.
3. Rural and Urban Sanitation.
4. Malaria and Mosquito Control Engineering.
5. Industrial Hygiene.
6. Chemistry of Water and Sewage.
7. Statistics.
8. Epidemiology and Control of Communicable Diseases.
9. Public Health Administration.
10. Public Health Bacteriology.
11. Public Health Entomology and Parasitology.

No candidate shall be permitted to sit for the examination unless he has earned at least 80 per cent of the attendance at Lectures and Practical classes.

(iii) A candidate shall be declared to have passed in the examination if he obtains not less than 50 per cent of the total marks, and not less than 40 per cent in each of the papers and in the Dissertation or thesis. All other candidates shall be declared to have failed in the examination.

Candidates securing not less than 75 per cent of the aggregate marks shall be declared to have passed the examination in the First Class, and those securing not less than 60 per cent of the aggregate marks shall be declared to have passed in the Second Class. All other successful candidates shall be declared to have passed the examination in the Third Class.

(iv) Every candidate who has passed the examination shall put in a period of practical training in an approved institution or works for a period of not less than six months before supplicating for the Degree.

*B. Advanced Hydraulics***Dam Construction and Irrigation.**

(i) Candidates for this Branch shall be required to have passed the B.E. Degree Examination in Civil Engineering.

(ii) The course of study shall extend over a period of one year covering the following subjects:—

1. Mathematics.
2. Fluid Mechanics including theory of models.
3. Open channel flow including design of channels.
4. Design of Hydraulic structures including low and high dams.
5. Hydrology and Flood control.
6. Irrigation practice including planning and construction of projects.
7. Soil Mechanics and Foundation Engineering. Due importance should be given for advanced design and drawing.

C. Structural Engineering

(i) Candidates for this branch shall be required to have passed the B.E. Degree Examination in Civil Engineering.

(ii) The course of study shall extend over a period of one year covering the following subjects:—

1. Mathematics.
2. Theory of structures.
3. (a) Steel structures (other than bridges)
or
(b) Concrete and Reinforced Concrete structures (other than bridges).
4. (a) Steel structure bridge and Masonry structures, etc.
or
(b) Reinforced Concrete bridges and Prestressed Concrete tunnels, etc.
5. (a) Air Craft structures
or
(b) Dams and Hydraulic structures.
6. Design and Drawing.

Due importance should be given for advanced Design and Drawing.

D. Electrical Machine Design.

(i) Candidates for this branch shall be required to have passed the B.E. Degree Examination in Electrical Engineering.

(ii) The course of study shall extend over a period of one year covering the following subjects:—

1. Mathematics.
2. Applied Physics.
3. Principles of Electrical Machinery.
4. Electrical Machine Design and Drawing.

TEACHING

BACHELOR OF TEACHING (B.T.)

Candidates seeking admission to this Degree must be **graduates**; the course of study extends over one year. The subjects of study and the scheme of examination are as follows:

Theory of Education and School Organization (A) (1 paper).
 Educational Psychology and Sociology (B) (1 paper).
 Methods of Teaching and Learning—General (C) (1 paper).
 Methods of Teaching and Learning—Special (D) (Optional Subjects) (1 paper).

Health Education, Citizenship Training and Physical Education (E) (1 paper).

Practical Training (F) :—

- (1) Teaching Practice.
- (2) Practical working and maintenance of Audio-Visual apparatus, etc.
- (3) Measurement and Evaluation.
- (4) Arts and Crafts, or Home Science.
- (5) Practical Aspects of Health Education, Citizenship Training and Physical Education.

Optional Subjects :—Not less than two and not more than three of the following :—Indian Languages ; Classical Languages ; English ; Mathematics ; Science ; Home Science ; Social Studies ; Basic Education ; Music ; Arts and Crafts ; Technical Subjects (Agriculture, Commerce, Engineering, etc.).

A candidate who fails in the Practical Test and passes in the Written Examination will be regarded as having failed in the Practical Test only and will be permitted to appear again for the Practical Test, and *vice versa*.

A candidate will not be permitted to appear for the Practical Test on more than two occasions : provided, however, it shall be competent for the Syndicate, if the Board of Examiners so recommend, to permit the candidate to appear on a third occasion.

A candidate will be declared to have passed the Written Examination if he obtains (i) not less than 35 per cent in each of the five papers and (ii) not less than 40 per cent in the five papers taken together. All other candidates will be deemed to have failed in the Written Examination.

A candidate shall be declared to have passed the Practical Test if he obtains not less than Mark C in each aspect of Teaching practice. F-i to F-v provided that a candidate who fails in one aspect only of F-ii to F-v shall be declared to have passed if he obtains not less than Mark B in Section F-i.

Successful candidates shall be classified separately for (a) the Written Examination and (b) the Practical Test. In the case of the written examination, successful candidates who obtain not less than 60 per cent of the total marks shall be placed in the First Class and those who obtain not less than 50 per cent of the total marks shall be placed in the Second Class. The remaining successful candidates shall be placed in the Third Class.

In the case of the Practical Tests, successful candidates who obtain not less than Mark A in Section F-i and not less than Mark B in all Sections F-ii to F-v shall be placed in the First Class. Those who obtain Mark A or B in Section F-i and not less than Mark B in any two aspects of Sections F-ii to F-v and not less than Mark C in the remaining aspects shall be placed in the Second Class. The remaining successful candidates shall be placed in the Third Class.

Provision has been made in the Regulations for certificated *bona fide* trained teachers who have taken a Degree in this University or in some other recognised University to appear for the B.T. Degree Examination after undergoing a special vacation course and study for one term in a Teacher's College.

Provision has also been made for candidates to qualify in an additional subject or subjects under section (D), under certain conditions.

DEGREE OF BACHELOR OF TEACHING—BASIC B.T.

(To take effect from the academic year 1957-58)

Eligibility for the Degree—

No candidate shall be eligible for the Degree of Bachelor of Teaching (Basic) unless he has taken a Degree in this University or a Degree in some other University accepted by the Syndicate as equivalent thereto and has also passed the prescribed examination, and produces before the examination a certificate that he has undergone the 'prescribed course in a Constituent or an Affiliated Training College.

Course of Study—

The course of study which shall last for one academic year shall include:

- A. Principles of Basic Education including a Brief History of Education.
- B. Educational Psychology and Sociology.
- C. Methods of Teaching and Learning.
- D. (i) Theory of Activities in Basic Education.
 - (a) Gardening and Agriculture.
 - (b) Cloth Craft.
 - (c) Community Living.
 - (d) Extension Service.
- (ii) Educational Administration and Supervision.

- E. (i) Health—Hygiene and Sanitation.
 (ii) Physical, Cultural and Recreational Activities.

F. Practical Training :

- (i) Teaching practice in Basic Schools (including practice lessons, observation and school visits).
 (ii) Tests, Measurements and Evaluation including the maintenance of cumulative record.
 (iii) (a) Gardening and Agriculture.
 (b) Cloth Craft.
 (iv) Safai and Social Hygiene.
 (v) Cultural Activities.

N.B.—(a) Methods of Teaching and Learning (C) shall include General Methods of Teaching and Learning and a basic knowledge of special methods pertaining to the four subjects included in the syllabus.

- (b) Practical Training shall include attendance in school for not less than five weeks in the year. Of these, at least three weeks shall be continuous and shall be devoted to actual teaching. The programme for each student shall approximate to the normal daily work of a teacher.

Passing Minimum—

No candidate shall be admitted to the B.T. (Basic) Degree unless he has passed both the practical and the written examinations.

Provided, however, that a candidate who fails in the Practical Examination and passes in the Written Examination shall be regarded as having failed in the Practical Examination only and shall be permitted to appear again for the Practical Examination and *vice versa*.

A candidate shall not be permitted to appear for the Practical Examination on more than two occasions, provided however, it shall be competent for the Syndicate, if the Board of Examiners so recommend, to permit the candidate to appear on a third occasion.

A candidate shall be declared to have passed the Written Examination if he obtains (i) not less than 35 per cent in each of the five papers and (ii) not less than 40 per cent in the five papers taken together. All other candidates shall be deemed to have failed in the Examination.

A candidate shall be declared to have passed the Practical Examination if he obtains not less than Mark C in each aspect of F-i to F-v, provided that a candidate who fails in one aspect only of F-ii to F-v shall be declared to have passed if he obtains not less than Mark B in Section F-i.

Classification of successful candidates—

Successful candidates shall be classified separately for (a) the Written Examination and (b) the Practical Examination. In the case of the

Written Examination, successful candidates who obtain not less than 60 per cent of the total marks shall be placed in the First Class and those who obtain not less than 50 per cent of the total marks shall be placed in the Second Class. The remaining successful candidates shall be placed in the third class.

In the case of the Practical Examination, successful candidates who obtain not less than Mark A in Section F-i and not less than Mark B in the other Sections F-ii to F-v shall be placed in the First Class. Those who obtain Mark A or B in F-i and not less than Mark B in any two aspects of Sections F-ii to F-v and not less than Mark C in the remaining aspects shall be placed in the Second Class. The remaining successful candidates shall be placed in the Third Class.

*Note :—*Marks for each of the various aspects of practical examination F-i to F-v shall be allotted on the following basis :

Mark A—Very Good (Class I Standard).

Mark B—Good (Class II Standard).

Mark C—Pass Standard.

Mark D—Failure.

MASTER OF EDUCATION (M.Ed.)

Candidates seeking admission to this Degree should have passed the B.T. Degree examination of this University or a Degree examination in Teaching of some other University accepted as equivalent thereto. No candidate shall be admitted to the examination unless he has taken the qualifying Degree examination in Teaching. The course may be taken immediately after the B.T. or equivalent course, or after an interval of some years under certain conditions. The course will last for one academic year. The subjects of study and the scheme of examination are as follows :—

- A. Philosophy of Education (including some aspects of Educational Sociology and Educational Psychology) (1 paper).
- B. Problems of Education in Modern India in their Comparative Setting (1 paper).
- C. 1. Educational Administration or C. 2. History and Evolution of Educational Thought or C. 3. Educational Sociology or C. 4. Advanced Educational Psychology (2 papers) ; and Thesis (the subject for which should be submitted for approval not later than 31st August). Candidates will be declared to have passed the examination if they obtain not less than 50 per cent of the marks in each of any two of the papers and not less than 35 per cent in each of the remaining papers and have satisfied the Examiners in the thesis.

Candidates who fail either in the written examination or the thesis will be given one more chance.

AGRICULTURE

BACHELOR OF SCIENCE (AGRICULTURE) B.Sc. (Ag.)

Candidates for the Degree should have passed the Pre-Professional examination or Intermediate examination with Chemistry and any two of the following subjects as optional subjects:—Mathematics, Physics, Natural Science, Botany, Zoology including Human Physiology, and Agriculture; and thereafter pursued a course of study for a period of three years at a College of Agriculture under the University and passed the prescribed examinations. The subjects of study comprising both Theoretical and Practical instruction are as follows:—Agronomy, Agricultural Botany, Agricultural Chemistry, Agricultural Zoology, Agricultural Engineering, Animal Hygiene and Horticulture. There are three examinations to be passed by candidates to qualify for the Degree, an examination being held at the end of each year. Passing the First Examination is compulsory before a candidate is allowed to sit for the Second Examination.

The subjects for the three examinations are as follows:—

First Examination.—Agronomy, Botany, Chemistry, Zoology and Agricultural Engineering (Civil).

Second Examination.—Agronomy—Plant Husbandry; Agricultural Botany, Agricultural Chemistry, Agricultural Entomology, Agricultural Engineering (Mechanical), Animal Hygiene.

Final Examination.—Agronomy I—Agricultural Economics including Co-operation and Propaganda; Agronomy II—Animal Husbandry and Farm Management; Agricultural Botany I—Plant Breeding and Genetics; Agricultural Botany II—Plant Pathology and Cryptogams; Agricultural Chemistry and Horticulture.

The examination in each subject shall be both written and practical. The minimum marks for a pass are 40 per cent of the marks in each of the subjects for the examinations.

VETERINARY SCIENCE

BACHELOR OF VETERINARY SCIENCE (B.V.Sc.)

After passing Pre-Professional Examination or the Intermediate Examination with Chemistry or Natural Science as one of the optional subjects, a candidate must prosecute his studies for a period of four academic years and one term at a College of Veterinary Science attached to the University and pass the prescribed examinations. The subjects of study comprising both Theoretical and Practical instruction are as follows:—

Preliminary.—(a) Biology; (b) Chemistry; (c) Animal Husbandry I.

Intermediate (Part I)—(a) Anatomy including Histology and Embryology; (b) Physiology including Experimental Physiology and Biochemistry; (c) Animal Husbandry Part II; (Hygiene) (d) Parasitology.

- (Part II)—(a) Pathology and Bacteriology including Immunology ;
(b) Pharmacology including Materia Medica and Pharmacy ;
(c) Animal Husbandry III.

Final.—(a) Medicine including Therapeutics and Toxicology ; (b) Surgery including Soundness, Obstetrics and Veterinary Jurisprudence ; (c) Animal Husbandry IV ; and (d) Meat Inspection.

There are four examinations to be passed by candidate to qualify for the Degree ; the first three examinations are held at the end of each year and the Final at the end of the course. Passing in the Preliminary Examination is compulsory before a candidate is allowed to sit for the Intermediate Examination. No candidate will be admitted to the Final Examination unless he has passed the Intermediate Part II Examination. The examination in each subject shall be written, practical and oral. The minimum marks for a pass are 50 per cent of the marks in each of the subjects for the examinations.

Provision has been made for practical training in a farm for 1½ months at the end of the first, second and third year courses of study and for 2 months during the fourth term of the final year course.

DEGREE OF MASTER OF VETERINARY SCIENCE (M.V.Sc.)

REGULATIONS

Conditions of Admission

1. No candidate shall be admitted to the Examination for the Degree of Master of Veterinary Science unless he produces satisfactory evidence to the effect that—

- (i) he has passed the B.V.Sc. Degree Examination of this University or an examination of any other University recognized by the University as equivalent thereto ;
- (ii) he has undergone a course of study extending over a period of two academic years in an institution recognized by or affiliated to the University.

Course of Study

2. The course shall comprise the study of anyone of the following branches according to the syllabus prescribed from time to time. One of the subjects in the branch shall be taken as main subject and the other two as subsidiary subjects :—

Branch I

Anatomy

Surgery

Obstetrics and diseases of the reproductive system.

Branch II

Physiology
Pharmacology and Materia Medica
Therapeutics

Branch III

Pathology
Bacteriology
Parasitology

Branch IV

Hygiene (Animal Husbandry)
Preventive Medicine
Meat and Milk Hygiene

Branch V

Animal Genetics and Breeding
Animal Nutrition
Dairy Science

Duration of course

3. The course for the Degree of Master of Veterinary Science shall extend over a period of two academic years—July to March each year and the examination shall be held once a year.

DEGREE OF BACHELOR OF SCIENCE IN TECHNOLOGY (B.Sc. Tech.)

The following Branches of study have been instituted :—

- (a) Chemical Engineering, (b) Textile Chemistry, (c) Textile Technology, (d) Leather Technology, (e) Pharmaceuticals and Fine Chemicals, (f) Electro-Chemistry, (g) Industrial Fermentation.

The course extends over two academic years.

Candidates for admission to the course should have passed the B.A. or B.Sc. Degree Examination of this University or of some other University accepted as equivalent thereto, and should have offered Mathematics as one of their optional subjects for the Intermediate Examination. Candidates selecting branches other than (c) and (e) should have offered for the B.A. or B.Sc. Examination, Chemistry as main and Physics as subsidiary subject. Those offering Branch (c) should have taken Physics or Chemistry as main and the other as subsidiary subject and those offering Branch (e) should have taken Chemistry as main and Botany as subsidiary subjects.

The examination in each Branch consists of two parts of which Part I may be taken at the end of the first year of the course. Except under certain conditions candidates will not be permitted to take Part II of the examination unless they have passed Part I.

Every candidate should put in a practical course of three months in the case of Chemical Engineering, and not less than six months in the case of Leather and Textiles, in an approved Mill or Factory, before supplicating for the Degree.

Candidates for Branch (a) Chemical Engineering will also be required to work on the design of a prescribed Manufacturing Plant and/or write a critical report on a special technical subject. Candidates will be given nearly 3 months' time for answering these questions.

DEGREE OF BACHELOR OF SCIENCE IN TECHNOLOGY (B.Sc. Tech.)

(Four year undergraduate course to take effect from the academic year 1957-58)

Admission to B.Sc.(Tech.) Examination—Conditions of.—

A candidate for admission to the Degree of Bachelor of Science in Technology shall be required to have passed the Pre-Professional Examination of this University with the Pre-Technological subjects under Part II, or an examination recognized as equivalent thereto, and to have undergone subsequently the prescribed course of study extending over a period of four years in a college recognized for the purpose.

Branches of study.—

The course of instruction shall cover any one of the following branches of study:—

- (a) Chemical Engineering.
- (b) Textile Technology.
- (c) Leather Technology.
- (d) Textile Chemistry.
- (e) Pharmaceuticals and Fine Chemicals.
- (f) Electro-Chemistry.
- (g) Industrial Fermentation.

3. The courses of study shall be as following according to a syllabus to be prescribed from time to time:—

- (a) Chemical Engineering.
- (b) Textile Technology.
- (c) Leather Technology.

FIRST YEAR

(a) Chemical Engineering—

English
Mathematics
Geology
Physics
Applied Mechanics
Chemistry

Engineering Drawing I
General Engineering
Surveying

(b) Textile Technology—

English
Mathematics
Physics
Chemistry
Electrical Engineering I
General Engineering
Engineering Drawing I

(c) Leather Technology—

English
Mathematics
Physics
Chemistry
Applied Mechanics
General Engineering
Heat Engines I
Electrical Engineering I
Mechanical Laboratory

SECOND YEAR

(a) Chemical Engineering—

German
Mathematics
Inorganic Chemistry
Organic Chemistry
Workshop Technology and Practice
Strength of Materials
Heat Engines I
Electrical Engineering I
Mechanical Laboratory
Engineering Drawing II

(b) Textile Technology—

German
Mathematics
Workshop Technology and Practice
Strength of Materials
Electrical Engineering II
Heat Engines I and II
General Textile Technology

Statistics
Engineering Drawing II
Spinning I
Weaving I

(c) Leather Technology—

German
Inorganic Chemistry
Organic Chemistry
Physical Chemistry
Engineering Drawing I
Heat Engines II
Electrical Engineering II
Mechanical Laboratory
Electrical Laboratory
Introductory Leather Manufacture
Tannery—Practical

THIRD YEAR

(a) Chemical Engineering—

Elements of Economics
Fuels and Industrial Stoichiometry
Advanced Physical Chemistry
Heat Engines II
Theory of Machines
Electrical Engineering II
General Chemical Technology I
Introductory Chemical Engineering
Technical Analysis
Mechanical Laboratory
Electrical Laboratory
Design Drawing

(b) Textile Technology—

Elements of Economics
Spinning II
Weaving II
Fabric Structure and Designing I
Textile Testing
Textile Physics
Theory of Machines and Textile Mechanics
Textile Chemistry I

(c) Leather Technology—

Elements of Economics
Advanced Physical Chemistry
Introductory Chemical Engineering

Leather Trades Drawing
 Chemistry of Leather Manufacture I
 Chemistry of Leather Manufacture II—Bacteriology
 Principles and Methods of Leather Manufacture
 Leather Chemistry—Practical
 Tannery—Practical

FOURTH YEAR

- (a) Chemical Engineering—
 General Chemical Technology II
 Chemical Engineering Thermodynamics
 Chemical Engineering I
 Chemical Engineering II
 Chemical Engineering III
 Chemical Engineering IV
 Industrial Organization
 Equipment Design Drawing
 Unit Operations Laboratory I
 Unit Operations Laboratory II
 Home Paper
- (b) Textile Technology—
 Industrial Organization
 Spinning III
 Weaving III
 Fabric Structure and Designing II
 Textile Engineering
 Textile Costing
 Cotton Industry and Trade
 Textile Chemistry II
 Textile Machine Design
- (c) Leather Technology—
 Industrial Organization
 Chemistry of Leather Manufacture III
 Do.
 Do.
 Principles and Methods of Leather Manufacture
 Organization of Leather Manufacture
 Analytical Chemistry of Leather Manufacture
 Microscopy
- Leather Chemistry—
 Practical and Physical Testing of Leather
 Tannery—Practical
 Leather Trades Engineering and Drawing
 Home Paper

Examination.—

There shall be one examination at the end of each year. A candidate for the Degree will be required to pass the four examinations, viz., First, Second, Third and Final Examination.

Certificates of attendance, etc.—

Every candidate appearing for the examination shall produce certificates—

- (a) of having attended at least 80 per cent of the lectures and practical classes ;
- (b) of having satisfied a test or tests conducted by the department ;
- and
- (c) of his progress and conduct having been satisfactory.

One examination in an year.—

The First, Second, Third and Final Examinations for the B.Sc. Degree in Technology shall be held once a year.

Passing marks.—

(i) A candidate shall be declared to have passed the First Examination, if he obtains not less than 40 per cent of the marks in each paper, and 40 per cent of the marks in each practical examination including records.

A candidate who passes in all subjects except two in the First Examination may be exempted from re-examination in those subjects, and permitted to proceed to the second year of the course and to appear for the Second Year Examination along with the examination in the subjects in which he has failed to secure passing marks. He will be declared to have passed the Second Examination only, if he secures passing marks in the remaining subjects of the first examination.

A candidate who fails in more than two subjects of the First Examination may appear at a subsequent examination in all the subjects after putting in a further course of study in a college for one academic year.

(ii) A candidate shall be declared to have passed the Second Examination, if he obtains not less than 40 per cent of the marks in each paper and not less than 40 per cent of the marks in each practical examination including records.

A candidate who passes in all the subjects except two at the Second Examination may be exempted from re-examination in all those subjects in which he has secured passing marks, and permitted to proceed to the third year course and take the Third Examination along with the examination in the subjects in which he has failed to secure passing marks at the Second Examination. He will be declared to have passed Third Examination only, if he passes in the remaining subjects.

A candidate who fails in more than two subjects in the Second Examination may appear at a subsequent examination in all subjects after putting in a further course of study in a college for one academic year.

(iii) A candidate shall be declared to have passed the Third Examination, if he obtains not less than 40 per cent of the marks in theory and practical examinations including records individually and secures not less than 50 per cent of the aggregate marks.

A candidate who secures 50 per cent of the aggregate marks, but fails to secure the minimum in not more than two subjects may be permitted to proceed to the final year and take the examination in the subjects in which he has failed to secure the minimum marks along with the Final Examination. He will be declared to have passed the Final Examination only, if he obtains passing marks in the subjects of the Third Examination in which he previously failed to secure passing marks.

A candidate who fails in more than two subjects or fails to secure 50 per cent of the aggregate will be deemed to have failed in the examination. He may appear for the Third Examination at a subsequent occasion after putting in a further course of study in a college for one academic year.

(iv) A candidate shall be deemed to have passed the Final Examination for the Degree, if he obtains at least 40 per cent of the marks in each of the theory and practical examinations including records individually and obtains not less than 50 per cent in the aggregate.

A candidate who obtains 50 per cent of the aggregate marks but fails to obtain the minimum in not more than two subjects may be exempted from appearance in those subjects in which he has secured passing marks. He can take the examination in the failed subject or subjects on a subsequent occasion. He will be deemed to have passed the Final Examination, if he obtains passing marks in the subject or subjects on a subsequent occasion.

A candidate who fails in the Final Examination either on account of deficiency in the aggregate or on account of failure in more than two subjects shall be required to take the whole examination for the Degree, but he will be exempted from putting in a further course before taking the examination.

Classification of candidates.—

Candidates who pass the Third and Final Examinations at the first attempt shall be awarded classes on the basis of the aggregate marks scored by them in the Third and Final Examinations as indicated below:—

Those obtaining 50 per cent and above but below 60 per cent of the total marks will be deemed to have passed the examination for the Degree in the Second Class.

Those obtaining 60 per cent and above of the total marks but below 70 per cent will be deemed to have passed the examination for the Degree in the First Class.

Those obtaining 70 per cent and above of the total marks will be deemed to have passed the examination for the Degree with Distinction.

All other successful candidates shall be deemed to have passed the examination in the Second Class.

Declaration of results.—

Symbolic representation shall be adopted in declaring the results and a statement of detailed marks shall not be furnished :—

Symbol A will denote 60 per cent and above of the marks.

Symbol B will denote 50 per cent and above but below 60 per cent.

Symbol D will denote distinction as having obtained 70 per cent and above.

Symbol F will denote failure.

Practical training before supplicating for Degree.—

Every candidate shall put in a practical course of not less than three months in an approved Mill or Factory before supplicating for the Degree.

Home paper.—

Every candidate for the B.Sc. Degree in Chemical Engineering shall be required to solve a question on design which shall be set by the Professors and Readers in Chemical Engineering in the institution not less than three months prior to the Final Examination at which it shall be considered under the subject heading 'Home Paper'. A similar Home Paper will also be given to Leather Technology candidates.

Concessions to B.Sc. Degree holders.—

Candidates who have passed the B.Sc. Degree examination of this University or an examination recognized as equivalent thereto, with Chemistry as the main subject and Physics and/or Mathematics as ancillary subjects (composite or separate), when admitted to the B.Sc. (Tech.) Degree course in Chemical Engineering or Leather Technology may be permitted to join the Second Year Class. Such candidates will be granted exemption from attending the courses of study and from appearing for the examinations of the first and second years in the subjects noted below provided these subjects have been offered for the Degree either of the Main standard or of the Ancillary standards.

FIRST YEAR

English
Mathematics I
Physics

Chemistry
 Physics Practical
 Chemistry Practical

SECOND YEAR

Inorganic Chemistry
 Organic Chemistry
 Physical Chemistry
 Inorganic Chemistry Practical
 Physical Chemistry Practical
 Organic Chemistry Practical

They shall be required to appear for all the other papers (Written and Practical) of the first and second examinations, after undergoing the prescribed course of study.

Transitory Regulations.—

The examinations for the B.Sc. Degree in Technology under the Old Regulations shall be held for the benefit of failed candidates for a period of five years from the date of giving effect to the New Regulations.

Candidates can qualify in another branch.—

A candidate who has qualified in one Branch of Technology may be allowed to proceed to another Branch after a course of study extending over a period of two years. He shall be required to pass in the Third and Final Examinations in the new branch of study offered. No fresh Diploma shall be awarded to such a candidate, but an endorsement shall be made regarding his qualification in an additional branch.

DEGREE OF BACHELOR OF ARCHITECTURE—(B. ARCH.)

Eligibility conditions of admission.—

Candidates for the Degree in Architecture shall be required to have passed the Pre-University Examination of this University, or an examination of any other University or Body recognised as equivalent thereto, and to have subsequently undergone a course of study extending over a period of five academic years in an institution or department approved by the University for the purpose, and to have passed the respective examinations for the Degree.

Candidates to be eligible for undergoing the course should have passed the Pre-University Examination offering Mathematics, as one of the subjects, under Part II and Drawing as another, or to have passed the Pre-University Examination of this University with Mathematics as one of the subjects under Part II and satisfactorily passed a test in Drawing which may be prescribed by the University or an examination accepted by the Syndicate as equivalent thereto before admission.

Courses of study.—

The course of study shall comprise instruction and practical training including visits to works in the following subjects in accordance with a syllabus prescribed from time to time:—

FIRST YEAR

1. Mathematical Calculus.
2. Elementary Physical Sciences.
3. Plane and Solid Geometry.
4. Elementary Building materials and construction.
5. History of Culture ; History of Architecture.
6. Free-hand drawing, sketching and colouring.
7. Theory of Architecture, rudimental principles of Architectural Composition and Planning—Development in India.
8. Elementary Architectural Design.
9. Orders of Architecture, Classic and Indian.
10. Measured drawings and simple scale drawings and lettering.
11. Workshop.
12. Outdoor sketching and landscaping.

SECOND YEAR

1. Advanced solid geometry and perspective.
2. Elementary building construction (Theory and Practical).
3. Elementary Applied Mechanics.
4. Surveying and Levelling.
5. History of Architecture.
6. Sciography.
7. Free-hand drawing and drawing from antique life.
8. Theory of Architectural design.
9. Architectural Design.
10. Making of Models.
11. Workshop.
12. Visits to works.
13. Preparation of measured drawings and writing reports thereon.

THIRD YEAR

1. Advanced Building material and construction.
2. Theory of Structure and Strength of Materials.
3. Theory of Architectural Design (Advanced).
4. Materials and Specification.
5. History of Architecture—
Renaissance Period of Italy, France and England.
Muhammadan Period in India.
6. Building Code Regulations.
7. Indian Architecture—Silpa Sastra, Manu Sara.

8. History of Culture—First Term—Elements of Building Economics—Second Term—Economic Principles.
9. Architectural Design—Theory of Planning and Design, Development of Architecture and Planning in India—Modern Period.
10. Service—Elementary Hygiene and Sanitation—Studio work.

FOURTH YEAR

1. Advanced Building Construction.
2. Structural Design, reinforced concrete and steel.
3. Advanced Architectural design.
4. Research in Architectural designs and studio work.
5. Furniture design and interior decoration.
6. Landscape Architecture—
 - (a) Historical.
 - (b) Plant Material.
 - (c) Design and Field Problems.
7. Services and equipments—Sanitation, air-conditioning, ventilation and illumination.
8. Acoustics.
9. Quantity Surveying and Advanced specification.
10. Preparing measured drawings and reports thereon.

FIFTH YEAR

1. Advanced Building Construction.
2. Advanced Structural design.
3. Advanced architectural design.
4. Town Planning including Civil architecture regional planning and housing.
5. Architecture in relation to allied arts, viz., sculpture and painting, archaeology (lectures).
6. Sociology and Building Economics.
7. Materials and detailed specification.
8. Service and equipment (advanced).
9. Professional practice.
10. Thesis writing (Architectural subjects).

Examinations.—

Apart from the examinations conducted by the institution or the department concerned, there shall be two examinations for the degree viz., the Intermediate Examination at the end of the third year and the Final Examination at the end of the fifth year.

The examinations will be held once a year.

Certificates of attendance. etc.—

Every candidate appearing for the examination shall produce certificates—

- (a) of having attended at least 75 per cent of the lectures and practical classes;

(b) of having satisfied a test conducted by the Department or the institution; and

(c) of his progress and conduct having been satisfactory.

Percentage of marks required for a pass and Classification of candidates.—

A candidate shall be declared to have passed the Intermediate Examination, if he obtains not less than 45 per cent in the written examination and practical examination separately and secures not less than 50 per cent in the aggregate.

A candidate shall be declared to have passed in the First Class if he secures not less than 60 per cent of the aggregate marks passing the whole examination at the first appearance, and in the second class if he obtains not less than 50 per cent of the aggregate marks. All other candidates shall be declared to have failed in the examination.

A candidate who secures 75 per cent in any subject shall be declared to have passed the examination in that subject with distinction provided he passes the whole examination at the first appearance.

No candidate shall be allowed to proceed to the fifth year, unless he has previously passed the Intermediate Examination.

A candidate shall be declared to have passed the Final Examination, if he obtains not less than 45 per cent of marks in the written examination, 45 per cent in the practical test and 45 per cent in the thesis, and secures not less than 50 per cent in the aggregate.

A candidate shall be declared to have passed the Final Examination in the First Class if he passes the Intermediate Examination and the Final Examination at the first appearance and secures not less than 60 per cent of the aggregate marks in the Final Examination. All other successful candidates shall be declared to have passed the examination in the Second Class.

Submission of Thesis.—

A candidate for the Degree shall be required to submit a thesis on an Architectural subject prescribed by the institution or department. Such thesis shall be prepared under the supervision of a teacher approved by the University for the purpose and shall be submitted before the 1st of April preceding the year of the final examination.

Exemption in Subject.—

A candidate who fails in the Intermediate or Final examination, but obtains not less than 50 per cent of the marks in any subject shall be exempted from re-examination in the subject or subjects on a subsequent occasion and shall be required to take only the remaining subjects.

Practical Training.—

A candidate shall be required to undergo a period of apprenticeship extending over one year in an approved practising Architect's Office and produce a certificate of satisfactory completion of such apprenticeship before supplicating for the Degree. Of this one year, six months may be spent during the vacations in the fourth and final years of the course.

Marks—Furnishing of.—

No details of the marks will be made available but the class obtained and the symbolic representation of the grade shall be indicated against each subject in the statement granted to the candidate.

Symbol A will denote 60 per cent and above of the marks

Symbol B will denote 50 per cent and above but below 60 per cent

Symbol C will denote 45 per cent and above but below 50 per cent

(In the case of Thesis in the Final Examination the Symbol will denote 40 per cent and above but below 50 per cent).

Symbol D will denote 75 per cent and above of the marks

Symbol F will denote Failure.

TITLES AND DEGREES IN ORIENTAL LEARNING

Siromani.—Added to Mimamsa, Vedantā, Nyaya, Vyakarana, Sahitya, Jyotisha or Ayurveda.

Vidvan.—In the case of candidates who have offered for examinations either (a) Sanskrit and one of the Languages Tamil, Telugu, Kannada, Malayalam, Marathi, Oriya, Hindi, or (b) Tamil, Telugu, Kannada, Malayalam, Marathi, Oriya or Hindi as the main language, with Sanskrit as a subsidiary language, or (c) Tamil, Telugu, Kannada, or Malayalam alone.

The course of study in each case extends over a period of four years. Candidates for the Siromani examination have to study and be examined in History of Sanskrit Language and Literature, and prescribed text-books relating to Sanskrit Literature, Tarka, Mimamsa, and Vyakarana, Manthras, Brahmanas, Upanishads, the Grihya and Dharma Sutras and the Smritis. For the Vidvan examination a candidate has to study History of Sanskrit Language and Literature, text-books prescribed for Grammar, Prosody and Poetics and also an Indian Language.

Provision has been made for the following Titles in Arabic, Persian and Urdu :—

Afzai-ut-Ulama.—(Arabic alone).

Munshi-i-Fazil.—(Persian and Urdu).

Adib-i-Fazil.—(Urdu and Persian or Tamil or Malayalam).

Tabib-i-Kamil.—(Tibb-i-Qanuni in Persian and Urdu).

Afzal-ul-Atibba.—(Tibb-i-Qanuni in Arabic and Urdu).

Provision has also been made for the following two titles :—

Malpan.—(Syriac alone).

Soppar.—(Syriac and Hebrew).

All these examinations leading to Titles are divided into two parts: Preliminary and Final. Candidates who obtain between 40 and 50 per cent of the total marks are declared to have passed the examination in the Third Class; those who secure between 50 and 60 per cent are ranked in the Second Class; and those who get 60 per cent and above are ranked in the First Class.

BACHELOR OF ORIENTAL LEARNING

The Degree of Bachelor of Oriental Learning is open to candidates who have passed the Intermediate Examination in Arts and Science of this University with Group D in Part III, or an examination accepted by the Syndicate as equivalent thereto and have pursued subsequently a course of study for a period of not less than two academic years in a Constituent or Affiliated College in the subjects prescribed for the B.O.L Degree Examination and have passed the examinations for the Degree.

The course shall consist of two parts and comprise instruction in the following subjects and the scheme of examination shall be as follows :—

Part I.—English.—The examination shall be the same as for Part I for the B.Sc. (Pass) Degree.

Part II.—General Indian History and the Final Division of any one of the Groups prescribed for the Oriental Titles.

A candidate who has qualified for the B.A. or B.Sc. (Pass or Honours) or has passed only Part I of the B.A. or B.Sc. (Pass or Honours), or B.O.L. (Honours) or has passed completely the B.A., B.A.(Hons.), B.Sc. (Pass), B.Sc. (Hons.), B.Com. (Pass) or B.O.L. (Hons.) Degree Examination of this University shall be exempted from the course and examination in Part I of the B.O.L. Degree.

A candidate will be permitted to qualify for the Degree in more than one Group, after undergoing the course of study for the additional Group for a period of not less than one academic year. He will be exempted from examination in Part I, General Indian History under Part II, and in certain subjects which are common to the Group in which he has already qualified, and in the new Group which he offers. (This course is not held at present)

SANGITA SIROMANI TITLE

Candidates for admission to the course should have either

- (a) passed the S.S.L.C. Examination of the Government of Madras, with Indian Music as their optional subject, and been declared

- eligible for admission to a course of study in this University ; or
- (b) passed the S.S.L.C. Examination of the Government of Madras without Indian Music as their optional subject, and declared eligible for admission to a course of study in this University and in addition to have passed the Government Technical Examination in Indian Music (Higher Grade) ; or the Teachers' Certificate Examination in Indian Music ; or
- (c) passed the Government Technical Examination in Indian Music (Higher Grade) or the Teachers' Certificate Examination in Indian Music, and in English of the Matriculation Examination of this University.

The course of study extends over four academic years.

The Examination shall consist of two Parts, the Preliminary Examination at the end of the second year, and the Final Examination at the end of the fourth year, and no candidate shall be admitted to the Final Examination unless he has passed the Preliminary Examination at least one year previously.

The course of study and scheme of examination are as follows :—

Preliminary

Part I—

Theory of Indian Music I (including prescribed classical works) (1 paper) ; and Theory of Indian Music II (including the History of Indian Music) (1 paper).

Part II—

Selected Language (2 papers)—Sanskrit, Tamil, Telugu, Kannada or Malayalam—same as for the Intermediate Examination under Part II.

Part III—

Practical—Vocal, Veena, Violin, Gottuvadyam, Nagaswaram. **Any** two, one of which shall be of the main standard, and the other of the subsidiary standard, provided vocal shall be one of the subjects chosen.

Final

Part I—

Theory of Indian Music I, Theory of Indian Music II (including prescribed classical works) and History of Indian Music.

Part II—

Practical (Main) I, Practical (Main) II, Practical (Subsidiary) or Musicology.

Candidates who have passed in Part II of the Intermediate or B.A. Degree Examination with one of the languages to be offered under Part II of the Preliminary Examination will be exempted from examination in that part of the Preliminary Examination.

Candidates who have passed the Intermediate Examination with Indian Music as one of their subjects under Part III will be permitted to take the Preliminary Examination without the prescribed certificate of attendance.

Candidates who have passed the B.A. Degree Examination with Indian Music under Part III will be exempted from the Preliminary Examination and permitted to take the Final Examination after undergoing the course for one academic year.

Candidates who have not offered for the Intermediate or B.A. Degree Examination one of the languages prescribed under Part II of the Preliminary Examination will be required to undergo the course for one academic year and pass the examination in one of those languages not less than one academic year before appearing for the Final Examination, provided that the above course may be taken concurrently with the Sangita Siromani Course.

All the exemptions referred to above may be availed of only by candidates who have passed the respective examinations of this University.

DIPLOMA IN ECONOMICS

The course extends over a period of one year for full-time students and over two years for part-time students. The subjects of study and the scheme of examination are as follows:—

- (1) Economics, (2) Statistical Methods, (3) Recent Economic History and Economic Geography, (4) Rural Economics, (5) Social Economics (including Elements of Social Institutions), (6) A special subject in (4) or (5).

Every candidate should also submit a short thesis based on original enquiry on some problem of limited scope connected with either (4) or (5).

DIPLOMA IN POLITICS AND PUBLIC ADMINISTRATION

This course is a part-time one and extends over a period of two academic years. The subjects of study are as follows:—

- (1) Politics, (2) Public Administration—Principles and Practice, (3) Constitutional and Administrative History of Modern India, (4) Economics, (5) Public Finance, (6) One of the following optionals in Law—Law of Contract, Indian Penal Code, Land Tenures, Constitutional Law, (7) One of the following optionals in Commerce—Business Organization, Public Accounts and Audit.

The admission to the course is open to persons who have passed a Degree Examination.

DIPLOMA IN CO-OPERATION

The course is a full-time one and extends over one academic year. It is open to persons who have passed the B.A. or B.A.(Hons.) Degree Examination in History or Economics of this University or an equivalent examination, and to persons, who, after passing the Intermediate Examination are engaged in Co-operative service for not less than two years.

The subjects for study are as follows. (i) Economics (a) Agricultural Organization and (b) Industrial and Commercial Organization. (ii) Co-operation—History and Principles. (iii) Co-operation—Law and Practice. (iv) Banking—Law and Practice. (v) Accountancy. (vi) Auditing.

There will also be a course of Practical Training and an examination in one of the following subjects: (a) Co-operative Banking; (b) Land Mortgage Banking; (c) Stores; (d) Marketing.

The course for this Diploma has not, however been started in any institution.

DIPLOMA IN STATISTICS

The course is a part-time one extending over two academic years or six terms, and is open to candidates who have qualified for a degree in any recognized University.

The subjects for study are: (1) Mathematics, (2) Economics, (3) Statistical Methods, (4) Applied Statistics, (5) and (6) Two of the following subjects—Actuarial Statistics, Economic Statistics, Mathematical Economics and Econometrics, Vital Statistics, and Population Problems, Agricultural Statistics (including Design of Experiments).

There will also be a practical examination.

CERTIFICATES AND DIPLOMAS IN FRENCH AND IN GERMAN

Certificate course extends over one academic year or three terms and Diploma course extends over a period of two academic years or six terms. For the purpose of entrance to the course no previous acquaintance with the language is necessary and the candidate will be taught on a syllabus and text-books to be prescribed from year to year. No candidates will be admitted to the above courses unless he has passed the examination for Certificates of Proficiency in Oriental Learning or the Matriculation Examination of this University or an examination recognised as equivalent thereto. These are part-time courses primarily intended for those who are desirous of proceeding of overseas for higher studies but are also open to other persons approved by the Syndicate. An examination will be held at the end of each year of the Course; a pass in the first examination will entitle the candidate for a certificate, and a pass in the second examination will qualify the candidate for the Diploma.

CERTIFICATE AND DIPLOMA IN LIBRARIANSHIP

The course for the Certificate in Librarianship extends over a period of about three months beginning in the month of April. The course is open to Intermediates in Arts and Science (ii) to those who have passed the Pre-University examination and have put in three years of service as a Librarian and (iii) to Librarians of five years' standing who are declared eligible for admission to a University course of study. The course consists of (1) Laws of Library Science including Library Organization, (2) Library Routine, classification and cataloguing besides practicals. Certificates are issued to successful candidates.

The course for the Diploma in Librarianship extends over a period of one academic year. Only graduates are eligible for admission to the course. The course will ordinarily consist of lectures and practical work in:— (1) Bibliography, (2) Book Selection, (3) Library Organization, (4) Library Administration, (5) Classification, (6) Cataloguing, (7) Reference Work. At the end of the course an examination is held and diplomas are issued to successful candidates.

DIPLOMA IN GEOGRAPHY

This course extends over a period of nine months in the year. Only graduates are admitted to the course. The subjects of study are: Regional Geography of the World (with special study of India and any one of the six continents—the particular continent will be prescribed from time to time) (3 papers); the Physical Basis of Geography including elements of Meteorology, Oceanography and Geomorphology (1 paper); A short course in (1) Historical Geography or (2) Political Geography or (3) Economic Geography or (4) Bio-Geography or (5) Anthropology Geography (1 paper) and on the use of Instruments, Map-making and Map-reading and practical work (1 paper). Every candidate shall also submit a dissertation on a selected area in India or his Field Work Records.

The examination is divided into two parts. A candidate shall be declared to have passed the examination if he obtains not less than 35 per cent of the marks in every paper and 40 per cent of the marks in each part.

(The course is not held at present.)

DIPLOMA IN INDIAN MUSIC

This Course extends over a period of two academic years. Provision is made for the teaching of theory of Music and practical course in Vocal, Violin and Veena. Only those persons who are eligible for a University course of study are admitted. At the end of the course there will be an examination which will consist of written

and practical examinations. Candidates who obtain not less than 35 per cent of the marks in theory, 40 per cent of the marks in the practical examination, and 40 per cent of the marks in the aggregate will be declared to have qualified for the Diploma.

CERTIFICATE AND DIPLOMA IN ANTHROPOLOGY

The course extends over a period of two academic years. It is open to persons who have qualified for a degree in this University or in any other recognised University, and such others as may be considered fit to undergo the course and have been recommended by the Head of the Department.

The subjects of study are as follows:—

- (i) Social and Cultural Anthropology.
- (ii) Physical Anthropology and Ethnology with practical work.
- (iii) Pre-historic Archaeology with practical work.

Candidates who pass in (i) or (ii) above at the end of the first year of the course will be entitled for a Certificate, and those who pass in all the above 3 subjects at the end of the second year of the course will be qualified for the Diploma.

DIPLOMA IN JOURNALISM

The course is a full-time one extending over one calendar year, and is open to graduates of this University or of any other recognised University.

The course, which is at present conducted in English, consists of the following subjects:—

Journalism, History of the Freedom of the Press and Ethics in Journalism, Composition, Precis Writing and Proof Reading, Legal Studies, Political Science and Modern Constitutions, etc. Social and Economic Structure of To-day, History of the Modern World. Everyday Science-General, Shorthand and Typewriting.

Practical training for a period of not less than six months in a Newspaper Office approved by the Syndicate is necessary.

DIPLOMA IN PHYSICAL EDUCATION

The course is a full-time one extending over one academic year, and is open only to students who have qualified for a degree in this University or other recognised Universities.

The course of study and scheme of examination are as follows:—

Organization and Administration of Physical Education; Anatomy, Physiology and Hygiene; Health Education and First Aid and Safety

Education ; Rules of Games, Coaching, etc. ; and Principles and Philosophy of Physical Education and History of Physical Education (5 papers) ; Practical Tests—Teaching Ability and Physical Skills.

DIPLOMA IN ANALYTICAL CHEMISTRY

The course is a full-time one extending over one academic year and is open only to those who have passed the B.Sc. Degree examination in Chemistry in the main standard. The scheme of examination is as follows: Theory written Paper (1), Practicals (1), Inorganic (2), Organic (3), Physico-Chemical and *viva voce*. The course has not yet been started.

POST-GRADUATE DIPLOMA IN HORTICULTURE

The course is a full-time one extending over a period of one year and is open only to candidates who have qualified for the B.Sc. (Ag.) Degree examination or B.Sc. or B.Sc. (Hons.) Degree examination in Botany.

The course shall cover both theoretical and practical instruction in Horticulture on scientific principles; together with teaching of the fundamental sciences allied to Horticulture. The scheme of examination is:—(1) Fundamental of Horticultural Science, (2) Individual fruit crops, (3) (in three parts) (a) Fruit products, (b) Pests of Horticultural Crops (c) Diseases of Horticultural Crops, (4) (in three parts) (a) Olericulture, (b) Ornamental Gardening (c) Plantation, beverage, drug and insecticidal crops.

DIPLOMA IN SOCIAL SERVICE

The course is a part-time one extending for one academic year of which two months not consecutive shall be spent in field work. Admission to the course is open to graduates or to those who are studying in Degree classes under prescribed conditions.

The scheme of examination is:—1. Sociology and Adult Education, 2. Economics (Social and Rural), 3. Industrial and Social Problems and Labour Problems, 4. Psychology and Medical Information.

DIPLOMA IN ARCHAEOLOGY

Regulations

1. *Eligibility*.—No candidate shall be eligible for the Diploma in Archaeology unless he has completed the prescribed course of study and has satisfied the examiners in the qualifying examinations.

2. Course of study.—The course of studies shall comprise the following subjects:—

- (1) Principles and methods of Archaeology.
- (2) Outline of the History and Civilization of Western Asia, Egypt and South Eastern Asia.
- (3) History of India down to 1200 A.D.
- (4) Indian Epigraphy and Numismatics.
- (5) History of Indian Art and Architecture.
- (6) Practical training in elementary Surveying, facsimile and architectural drawing, Museology, Photography and a Season's work in excavation.

3. Qualifications for admission.—Admission to the course of study shall be open to students who have qualified for a degree in History or a Classical or modern Indian Languages in this University or other recognised University.

4. Last date for submission of application.—Applications to enter upon the course of study must reach the Registrar not later than the 2nd July of each year in the prescribed form obtainable at the office of the Registrar.

5. Duration of the course.—The course shall be a full time one extending over two academic years or six terms, provided however, that a student who has already qualified for the M.A. Degree of this University in History with Archaeology as one of his special subjects shall be exempted from undergoing the course for one academic year.

6. Passing marks and classification of successful candidates.—A candidate shall be declared to have passed the Diploma Examination if he obtains not less than 40 per cent in each of the first six papers and 40 per cent separately in both Practical and Oral Examination. Those candidates who secure 60 per cent of the total marks and above shall be deemed to have passed with distinction.

DIPLOMA IN BUSINESS MANAGEMENT

1. Eligibility for Diploma.—No candidate shall be eligible for the Diploma in Business Management unless he has completed the prescribed course of study and has satisfied the examiners in the qualifying examination.

2. Course of study.—The course of study shall comprise an integrated treatment of the following subjects in accordance with the prescribed syllabus:—

- 1 Management Principles.
- 2 Management Practice.

3. Marketing and Distribution.
4. & 5. Trade and Transport
6. Economic Analysis.
7. Economic Statistics
8. Public Finance, Public Utilities and Business Finance.
9. Higher Business Control including Accounting and Cost Accounting, Business Law and Finance.
10. Personnel Management and Business Psychology.

3. *Qualifications for admission.*—The course shall be open to those who have qualified for a Degree in Arts, Science or Commerce of this University or any other University recognized as equivalent thereto with an year experience on the job.

4. Application for admission to the course must reach the Registrar, not later than the 2nd July in each year in the prescribed form obtainable at the Office of the Registrar.

5. *Duration of the course.*—The course shall be part-time for the present extending over a period of three academic years or nine terms.

6. *Attendance.*—No student shall be admitted to the examination unless he has attended not less than 75 per cent of the total attendance at lectures and has produced a certificate from the Head of the Department certifying that his progress and conduct have been satisfactory.

DIPLOMA COURSE IN DIETETICS REGULATIONS

1. *Conditions of admission:*

Candidates for the Diploma in Dietetics shall be required to have passed the M.B., B.S. Degree Examination or the B.Sc. Degree Examination in Nursing or the B.Sc. Degree Examination in Home Science or the B.Sc. Degree Examination with Chemistry Main or Ancillary or Physiology Main or Ancillary, of this University or an examination of some other University accepted by the Syndicate as equivalent thereto and to have undergone a course of study for one academic year in a constituent or an affiliated college of this University.

2 *Course of study:*

The course shall cover both theoretical and practical instruction in the following :

1. (a) Bio-chemistry, Physiology in relation to Nutrition.
- (b) Distribution and Functions of individual Nutrients.
- (c) Composition of normal diets.
- (d) Analysis of Food, Blood, excreta etc.

2. Diet therapy.
 3. Bacteriology in relation to Food Nutrition and Hygiene.
 4. (a) General Catering.
(b) Elementary Statistics.
(c) Methods of Investigation.
(d) Economic aspects of Nutrition.
(e) Problems affecting dietary habits in Industrial areas etc
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MYSORE

INTRODUCTORY: CHARACTER OF THE UNIVERSITY

The University of Mysore was the first University to be founded in the Indian States. The two State Colleges which had long been affiliated to the Madras University formed the nucleus of the new University of Mysore.

A regulation amending and consolidating the provision of the Mysore University Regulation V of 1916, as amended from time to time, received the assent of His Highness the Maharaja on the 6th day of January, 1933, and came into force on the 1st day of July, 1933.

The Act of 1933 has been replaced by a new Act of 1956 and made the University an autonomous body with effect from 1st January, 1957. Under the new Act some reforms in the constitution and powers, University Senate, Syndicate and Academic Council have been introduced, keeping in view of the recommendations of the Universities Commission.

The University is a teaching, affiliating and examining body.

The University is empowered to affiliate Colleges under conditions prescribed in the Statutes and Ordinances.

There are 19 University Institutions, five at Mysore, six at Bangalore, one at each District Headquarters—Kolar, Mandya, Hassan, Chikmagalore, Shimoga, Tumkur, Chitaldroog and one at Davangere. There are two separate colleges for women one at Mysore and another at Bangalore.

There are thirty-two Affiliated Colleges six at Mysore, fourteen at Bangalore, one at Davangere, one at Bellary, one at Kanakapur, one at Konanur, one at T. Narasipur, one at Mercara, five at Mangalore and one at Chamarajanagar.

Chancellor :

His Highness the Rajpramukh Sri Jayachamaraja Wadiyar
Bahadur, G.C.S.I., G.C B. of Mysore.

OFFICERS OF THE UNIVERSITY

Vice-Chancellor :

Dr. K. V. Puttappa, M.A., D.Litt.

Registrar :

Sri P. Mallikarjunappa, M.Sc.

Controller of Examinations :

Sri D. Javare Gowda, M.A.

Bursar :

Sri T. K. Gurusiddappa, M.A.

Librarian :

Sri K. S. Murthy, B.A.

AUTHORITIES OF THE UNIVERSITY

1. The Senate.
2. The Syndicate.
3. The Academic Council.
4. The Faculties.
5. The Boards of Studies.
6. The Board of Appointments.
7. The Committee of Finance and other Boards.

DEANS

Faculty of Arts :

Sri T. N. Sreekantatya.

Faculty of Science :

Sri P. H. Nagappa, M.A., A.I.A. (London).

Faculty of Engineering and Technology :

Sri B. R. Narayana Iyengar, B.E.

Faculty of Medicine :

Sri Y. Appajee, B.A., M.B., (Cal.), M Sc (London).

Faculty of Commerce :

Dr. G. Ramakrishna Reddy, M.A., Ph.D.

Faculty of Law :

Sri P. Siva Shankar, B.A., LL.B.

Faculty of Education :

Sri A. C. Deve Gowda, M.A. (Col.), B.T., M.Ed. (Leeds).

THE FOLLOWING ARE THE HEADS OF DEPARTMENTS

English	..	Sri C. D. Narasimhiah, M.A. (Cantab.), (M.C.)
Kannada	..	Sri T. N. Sreekantaiya, M.A., (M.C.)
Sanskrit	..	Sri N. Shivarama Sastry, M.A., (M.C.)
Tamll	..	Sri S. Rudrapathi, M.A., (C.C.B.)
Telugu	..	Vidwan K. Subbaramappa, M.A., B.O.L., B.Ed., (M.C.)
Hindi	..	Sri N. Nagappa, M.A., (M.C.)
Urdu, Persian & Arabic	..	Dr. Khizer Ali Khan, M.A., Ph.D., (Lond) (M.C.)
Mathematics	..	Sri P. H. Nagappa, M.Sc. (Lond.), A B.A. (London), (C.C.B.)
Physics	..	Sri S. B. Bondade, B.A., B.Sc. (Hons) (London), LL.B., (C.C.B.)
Chemistry	..	Dr. G. Narayan, M.Sc., Ph.D., (C.C.B.)
Geology	..	Sri M. R. Sreenivasa Rao, M.Sc., (C.C.B.)
Zoology	..	Dr. B. R. Seshachar, D.Sc., (C.C.B.)
Botany	..	Dr. K. N. Narayan, M.Sc., Ph.D , (C C.B)
History	..	Dr. S. Sreekantha Sastry, M.A., D.Litt., (M.C.M.)
Economics	..	Dr. G. T. Hutchappa, M.A., Ph.D., (M.C.M.)
Geography	..	Dr. Gouse Khan Ghorl, M.A., Ph.D., (M.C.M.)
Psychology	..	Dr. B. Kuppuswami, M.A., D.Litt. (M C M.)
Philosophy & Sociology	..	Sri N. A. Nikkam, M.A., (Cantab.) (M.C.M.)
Political Science	..	Dr. K. B. Y. Thotappa, M.A., Ph.D. (Bombay), Ph.D. (Chicago), (M.C.M.)
Journalism	..	Sri Nadig Krishnamurthy, M.A., (M.C.M.)
Inodology	..	Dr. M. Seshadri, M.A., Ph.D., (M.C.M.)
Home Science	..	Dr. B. Susheela Lingaiah, M.Sc., M.S., Ph.D., (M.C.W.B.)
Statistics	..	Sri S. K. Ekambaram, B.Sc. (Hons.) M.A. (Cantab.), (M.C.M.)
Teaching	..	Sri A. C. Deve Gowda, M.A. (Col.), B.T., M.Ed. (Leeds). Dip. Edin., (T.C.M.)

DEPARTMENT OF MEDICINE

Surgery	..	Sri A. K. Gopalarajan, M.B., B.S., F.R.C.S (Edin.)
Clinical Surgery	..	Sri K. Krishnamurthy, M.B., B.S., M.S. (Surg.), F.R.C.S (Edin.)
Physiology	..	Dr. B. Puttaraj Urs, B.Sc., M.B., B.S., Ph D.
Anatomy	..	Sri Y. Appajee, B.A., M.B., M.Sc. (London). (Med. Col. Mysore)
Pathology	..	Sri Charles D'Souza, B.Sc., M.B., B.S., M.S. (Path.), D.B. (Manch.)
Medicine	..	Sri M. Basavaraj Urs, B.Sc., M.B., B.S., D.T.M. & H.F.R.P.S.
Midwifery		Smt. Padmasundaram, M.B., B.S.
Gynaecology	..	Smt. Jayalakshmi Yagnanarayana Iyer, M.B., B.S., F.R.F.P.S (Glas), F.R.C.S. (Edin.)
Ophthalmology	..	Sri S. T. Puttanna, B.Sc., M.B., B.S., D.O.M.S (Eng.)
Pharmacology & Materia Medica	..	Sri G. S. Ragunatha Rao, B.Sc., M.B., B.S., D.Phil. (Oxon.)
Forensic Medicine	..	Sri A. T. Srinivasa Iyengar, M.B., B.S.
Hygiene	..	Sri B. N. Lingaraju, M.B., B.S., D.P.H., M.P.H.

DEPARTMENT OF ENGINEERING & TECHNOLOGY

Mechanical	..	Sri B. R. Narayana Iyengar, B.Sc., B.E., S.M. (Mech.), (M.I.T.), A.M.I.E. (India)
Civil	..	Sri D. B. Narasimhaiah, B.E., M.Sc. (Mech.), M.Sc. (C.E.), Dip. in Tech.
Electrical	..	Sri W. J. Paulraj, B.A., B.E., A.M.I.E. (India).
Commerce	..	Dr. G. Ramakrishna Reddy, M.A., Ph.D. (Com. Col.)
Agriculture	..	Sri B. Venkoba Rao, B.Sc., M.S. (Agri. Col.)
Law	..	Sri P. Shivashankar, B.A., LL.B. (Law Col.)

NOTE TO ABBREVIATIONS USED

C.C.B.	..	Central College, Bangalore.
M.C.	..	Maharaja's College, Mysore.
E.C.B.	..	Engineering College, Bangalore.
Med. C	..	Medical College, Mysore.
Med. S.	..	Medical School.
T C M	..	Teachers' College, Mysore.
C O C.B.	..	Commerce College, Bangalore.
Agr. C.	..	Agricultural College, Bangalore.
Law C.	..	Law College, Bangalore.
P T	.	Part-Time.
F T	..	Full-Time.

CONSTITUTION OF THE UNIVERSITY

H. H. The Rajapramukh of Mysore is the Chancellor of the University.

The Officers and Authorities of the University are—

1. The Vice-Chancellor, 2. The Registrar, 3. The Senate, 4. The University Syndicate, 5. The Academic Council, 6. The Faculties and their Deans. 7. Such other officers and authorities as may be provided for by the Statutes.

The Vice-Chancellor who is a full-time officer is the *ex-officio* Chairman of the Senate and the University Syndicate and the Academic Councils. He is also the principal Executive Officer and the academic officer of the Senate and of the Councils. The executive government of the University is vested with the University Syndicate which consists of 14 members. The Senate with a maximum strength of 75 members is in entire charge of the general organization of the University and its administration including the institution and conferment of degrees. The Academic Council is the academic authority of the University and is responsible for the maintenance of the standard of teaching and examination in the University. The University at present includes the Faculties of Arts, Science, Engineering and Technology, Medicine, Law, Education and Commerce.

Number of students in the University under the different Faculties

The following were the number of students under the respective Faculties during 1954-55.

UNIVERSITY INSTITUTIONS

Maharaja's College, Mysore	..	1422
Yuvaraja's College, Mysore	..	1696
Maharani's College for Women, Mysore	..	904
Medical College, Mysore	..	548
Teachers' College, Mysore	.	92
Central College, Bangalore	..	1786
Intermediate College, Bangalore	.	2175
College of Engineering, Bangalore	.	763
College of Commerce, Bangalore	..	1110
Medical School, Bangalore	..	426
Maharani's College for Women, Bangalore	..	1472
First Grade College, Tumkur	..	1658
Intermediate College, Hassan	.	453
First Grade College, Shimoga	.	936
Intermediate College, Davanagere		628
Intermediate College, Chickamagalur	..	234
Intermediate College, Chitaldrug	..	516
Intermediate College, Kolar	..	588
Intermediate College, Mandya	.	365
St. Philomena's College, Mysore		1030
Sharadavilas College, Mysore	.	719
National Institute of Engineering, Mysore	.	399
D. Banumiah's College of Commerce, Mysore	..	353
National College, Bangalore		777
Vijaya College, Bangalore	..	521
Basappa Intermediate College, Bangalore	.	477
Govt. Agricultural College, Bangalore	.	271
Govt. Law College, Bangalore		450
B. M. S. College of Engineering, Bangalore.	..	923
St. Joseph College, Bangalore-1	.	1333
Mount Carmel College, Bangalore-1	..	642
Sri Krishnarajendra Silver Jubilee Technological Institute, Bangalore	..	65
B. D. T. College of Engineering, Davanagere	..	319
Verasaiva College, Bellary	.	516
Intermediate College, Chamarajanagar	..	84
Rastriya Vidyalaya Teacher's College, Near Lalbagh, Bangalore-4		87
Bangalore Medical College, Fort, Bangalore	..	594
Sharadavilas Law College, Mysore	..	122
Institute of Education, Mysore	.	48
Intermediate College, Kanakapura	.	95
Intermediate College, Ramanathpur, Konanur.	..	85
Intermediate College, T. Narasipur	..	43
All India Institute of Mental Health, Bangalore-2	.	..

Arts and Commerce College, Gandhinagar, Bangalore	..	75
Acharya Patasala Arts and Commerce College, Basavanagudi Bangalore-4	..	215
Govt. College, Mercara	..	287
St. Alloysius College, Mangalore	..	—
St. Agnes College, Mangalore	..	—
Govt. Training College, Mangalore	..	—
St. Ann's Training College, Mangalore	..	—
Govt. Arts College, Mangalore	..	—

*Number of Successful Candidates in the different
Examinations*

UNIVERSITY EXAMINATIONS

The following is the statement of the results in various Examinations of 1956-57 :—

March 1957

Examinations	No. Examined	No Passed			Not Classed	Percent- age
		I Class	II Class	III Class		
B.A. Degree—						
Part I	889	1	16	464	.	54.0
Part II	758	26	78	423	.	69.5
Part III	945	4	49	361	..	43.8
B.Sc. Degree—						
Part I	2154	1	24	1061	2	50.5
Part II	1813	73	194	1023	.	71.1
Part III	2934	46	173	535	5	22.4
B.A. (Hons.) Degree Preliminary—						
Part I	136	.	..	..	115	84.5
Part II	135	.	..	.	111	82.2
Part III	144	.	..	..	132	91.6
B.Sc. (Hons.) Degree Preliminary—						
Part I	143	.	..	..	129	90.0
Part II	130	..	..	..	118	90.0
Part III	136	..	..	..	115	84.6
Eligible for the Degree—						
B.A.	..	354				
B.Sc.		646				

WOMEN STUDENTS

	No. Examined	No. passed
B.A. Degree—		
Part I ..	23	6
Part II ..	6	5
Part III ..	24	9
All Parts ..	226	118
Parts I and III .	8	3
Parts I and II .	1	
Parts II and III ..	1	..
Eligible for the Degree : 141.		
B.Sc. Degree—		
All Parts ..	241	76
Part I only .	16	4
Part II only ..	1	1
Parts I and II .	1	
Parts II and III ..	2	..
Part III only ..	73	26
Parts I and III .	12	1
Eligible for the Degree : 108.		
B.A. (Hons.) Preliminary—		
All Parts ..	33	26
Part III only .	4	3
B.Sc. (Hons.) Preliminary—		
All Parts ..	18	15
Part I only .	1	1

September 1956

Examinations	No. Examined	I Class	II Class	III Class	Not Classed	Percent age.
B.A. Degree—						
Part I	306	..	..	148	..	49.2
Part II	101	1	8	68	..	68.0
Part III	377	..	4	198	..	49.0
B.Sc. Degree—						
Part I	826	..	..	394	1	51.0
Part II	314	4	20	194	..	61.8
Part III	1355	2	42	254	4	19.5

Examinations	No Exa- mined	No. Passed I Class	II Class	III Class	Not Class- ed	Total	Per- cent- age
B.A. (Hons.) Degree Preliminary—							
Part I	11	..	..	..	7	63.0	
Part II	7	.	..	..	5	71.0	
Part III	2	.	..	..	2	100.0	
B.Sc. (Hons) Degree Preliminary—							
Part I	31	..	.	..	13	42.0	
Part II	20	..	..	..	19	95.0	
Part III	8	..	..	..	8	100.0	
Eligible for the Degree :—							
B.A. ..	230						
B.Sc.	432						

WOMEN STUDENTS

	No. Examined	No. passed
B.A. Degree—		
All Parts	..	8
Parts I and III only	..	27
Parts II and III only	..	5
Part III only	..	21
Part I only	..	26
Part II only	.	11
Parts I and II only		9
Eligible for the Degree : 47.		
B.Sc. Degree—		
All Parts	..	10
Parts I and III	.	22
Parts II and III	..	8
Part III only	..	74
Part I only	..	35
Part II	..	12
Parts I and II	..	5
Eligible for the Degree : 63.		
B.A. (Hons.) Degree Preliminary—		
Part I only
Part II only
Part III only	..	2
B.Sc. (Hons.) Degree Preliminary—		
Part I only	..	1
Part II only	..	1
Part III only	..	1

March 1957

Examinations	No. Ex- amined	No. Passed			Not Classed	Total	Percent- age
		I Class	II Class	III Class			
Intermediate in Arts	1986	11	70	389	195	665	33.5
Intermediate in Science	6871	259	381	753	635	2028	29.5
Total	8857	270	451	1142	830	2693	

September 1956

Intermediate in Arts	786			4	213	217	27.6
Intermediate in Science	3140		4	21	325	850	27.9
Total	3926		4	25	1038	1067	

LADIES ONLY

	March 1957	No. appeared	No. Passed
Intermediate in Arts	.	634	281
Intermediate in Science		707	294
Total	.	1341	575

	September 1956		
Intermediate in Arts		179	57
Intermediate in Science	..	302	98
Total	..	481	155

April 1957

Intermediate Examination in Commerce—

Examinations	No. Exa- mined	No. Passed			Not Classed	Percen- tage
		I Class	II Class	III Class		
Part I	797	..	..	182	65	
Part II	722	5	31	..	..
Part III	782	..	..	..	..
Graduates appearing Part III only	19	..	..	..	13	
Number of candidates passed	283.					

Examinations	No. Exa- mined	No Passed			Not Classed	Percent- age
		I Class	II Class	III Class		
B.Com. Degree—						
Part I	427	2	25	156	.	42.8
Part II	368	1	15	143	..	43.2
Part III	303	2	38	162	..	66.6
Number of candidates Eligible for the B.Com. Degree: 133 :						

*September 1956 :***Intermediate Examination in Commerce—**

Part I	240	..		6	140
Part II	125	.	..	6	..
Part III	224	.	..	6	..
Graduates appearing for Part III only :					
	9		..	..	4

Total number of candidates
passed : 150.

B.Com. Degree Examination—

Part I	175	.	3	55	..	33.1
Part II	148	..	6	81	..	56.08
Part III	111	..	7	38	..	40.5

Number of candidates Eligible
for the Degree : 79

WOMEN STUDENTS*April 1957 :*

			No. appeared	No. passed
I.Com.	..	..	4	1
B.Com.	..	..	3	2

Examinations—

- (a) B.A. (Hons.)
(b) B.Sc. (Hons.)

Examinations	No. Exa- mined	No. Passed			Not Classed	Percent- age
		I Class	II Class	III Class		
Degree Final	114	8	52	40	2*	
Degree (Final)	203	35	41	46	8*	
(c) M.A. Degree	87	13	56	..	..
(d) M.Sc. Degree	95	27	47	..	..
(e) M.Ed.	1	1	..	..	..

WOMEN STUDENTS

Examinations	No. Exa- mined	No. Passed			Not Classed	Percent- age
		I Class	II Class	III Class		
(a) B.A. (Hons.)						
Final	34	3	18	10	..	
(b) B.Sc. (Hons.)						
Final	27	5	10	6	..	
(c) M.A. Degree	16	..	16	..	..
(d) M.Sc. Degree	13	4	9	

ENGINEERING

First Examination in Engineering—

484	59	117	..
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Second Examination in Engineering—

Civil	451	31	125	74.5
Mechanical	204	10	46	69.6
Electrical	59	4	21	..	..	74.6

Third Examination in Engineering—

Civil	401	21	141	..	..	73.8
Mechanical	217	11	52	..	..	65.0
Electrical	95	9	31	..	..	74.7

B.E. Degree—

Civil	292	22	84	..	..	90.7
Mechanical	149	14	46	..	..	72.5
Electrical	131	12	30	..	..	59.6

ENGINEERING

September 1956

Examinations	No. Examined	No. Passed			Not Classed	Percent- age
		I Class	II Class	III Class		
First Examination in Engineering—						
	141	1	107	..	..	76.6
Second Examination in Engineering—						
Civil	192	..	131	..	..	68.7
Mechanical	73	..	35	..	..	49.0
Electrical	21	..	11	..	..	52.5
Third Examination in Engineering—						
Civil	253	..	138	..	..	84.1
Mechanical	153	..	61	..	..	60.4
Electrical	68	..	18	..	..	62.1
B.E. Degree—						
Civil	212	3	131	..	..	76.8
Mechanical	99	2	63	..	..	83.7
Electrical	99	1	56	..	..	74.5

April 1957

Examinations	No. Exa- mined	No. Passed			Not Classed	Percent- age
		I Class	II Class	III Class		
B.Ed.	251	9	64	4	21	
F.L.	291	..	23	118	5	50.1
B.L.	170	..	20	106	1	74.7
I B.Sc. Textiles	26	..	16	..	..
II B.Sc. Textiles	18	..	16	..	..
Final B.Sc. Textiles	27	..	23	..	2	
I B.Sc. Agriculture	96	4	62	..	8	
II B.Sc. Agriculture	100	1	60	..	2	
Final B.Sc. Agriculture	58	..	38	..	3	
I L.M.P.	15	..	..	..	10	
II L.M.P.	127	..	42	..	12	
III L.M.P.	128	..	34	..	36	
Final L.M.P.	62	..	36	..	10	
Pre-Medical	55	..	9	..	31	
I M.B. Part I	76	..	..	..	54	
I M.B. Part II	78	..	14	..	20	
II M.B. Part I	44	1	37	..	..
II M.B. Part II	50	..	27	..	11	
II M.B. Part III	67	..	17	..	17	
Final M.B.	49	..	21	..	11	
German Diploma	24	5	5	..	..
French Diploma	6	2	3	..	..
D.M.P. Part I	6	1	4	..	..
D.P.M. Part I	6	1	5	..	..

WOMEN STUDENTS

Examinations	No. Examined.	No. Passed
F.L.	..	2
B.L.	..	5
B.Ed.	..	75
I L.M.P.	..	2
II L.M.P.	..	16
III L.M.P.	..	15
Final L.M.P.	..	12
Pre-Medical	..	9
I M.B. Part I	..	12
I M.B. Part II	..	19
II M.B. Part I	..	6
II M.B. Part II	..	10
II M.B. Part III	..	8
Final M.B.	..	9
German Diploma	..	2
D.M.P. Part I	..	1
D.P.M. Part I	..	1

September 1956

Examinations	No. Examined	No. Passed			Not Classed	Percent- age
		I Class	II Class	III Class		
I L.M.P.	44	..	4	..	26	
II L.M.P.	105	..	23	..	39	
III L.M.P.	110	..	17	..	38	
Final L.M.P.	81	.	52	..	14	
Final B.Sc. Textiles	10	.	4	.	3	
Final B.Sc. Agriculture	14	..	3	..	8	
F.L.						
B.L.						

December 1956

Pre-Medical	191	12	77	..	47
I M.B. Part I	145	.	..	..	109
I M.B. Part II	100	.	37	..	11
II M.B. Part I	41	..	34	..	..
II M.B. Part II	58	.	31	..	9
II M.B. Part III	67	.	23	..	7
Final M.B.	49	..	23	..	8

WOMEN STUDENTS

Examinations	No. Examined	No. Passed
Pre-Medical	..	25
I M.B. Part I	..	24
I M.B. Part II	..	22
II M.B. Part I	..	2
II M.B. Part II	..	10
II M.B. Part III	..	8
Final M.B.	..	11

September 1956

Examinations	No. Examined	No. Passed
F.L.	..	1
B.L.	..	1
I L.M.P.	..	3
II L.M.P.	..	15
III L.M.P.	..	18
Final L.M.P.	..	11

No. of candidates who took degrees at the Convocation of 1957

	In Person	In Absentia	Total
Ph.D. (Arts)	1	..	1
M.A.	44	15	59
B.A. (Hons.)	87	11	98
B.A.	440	73	513
Ph.D. (Science)	2	..	2
D.Sc.	.	1	1
M.Sc.	47	19	66
B.Sc. (Hons.)	33	23	106
B.Sc.	766	177	943
B.Sc. (Agri.)	25	11	36
B.Sc. (Textiles)	13	7	25
B.Ed	101	25	126
M Ed	1	..	1
B.L.	84	23	107
B.Com.	156	20	176
M.B.B.S.	62	10	72
B.E.	244	263	507
Total	2,161	678	2,839

Particulars relating to Masters' Degree Examination held in July-August 1955:—

M.A.

		Boys	Girls
No. appeared	..	78	21
No. passed	..	55	16
First class	..	11	6
Second class	..	44	10

M.Sc.

		Boys	Girls
No. appeared	..	71	12
No. passed	..	54	8
First class	..	21	5
Second class	..	33	3

Post-Graduate Diploma Examination in Indology held in July 1955 :—

		Boys	Girls
No. appeared	..	2	..
No. passed	..	..	..
First class	..	..	..
Second class	..	2	..

Post-Graduate Diploma Examination in Hindi held in July 1955 :—

No. appeared	..	2	..
No. passed	..	2	..
First class	..	..	..
Pass	..	2	..

RESEARCH

Facilities for research exist in the following subjects.

Arts .. English, Kannada, Sanskrit, History, Economics, Political Science, Philosophy, Sociology, Psychology, Indology.

Science .. Chemistry, Physics, Botany, Zoology, Geology, Mathematics.

Research are being carried by the members of the teaching staff and Fellowship Scholars and Ph.D. students working under the several Fellowships/Scholarships Schemes of the G.O.I., C.S.I.R. etc.

SCHOLARSHIPS AND MEDALS

The University has received a large number of endowments ranging from Rs. 300 to Rs. 1,02,000 for the award of medals, prizes and scholarships. The total amount of endowments at present stands at about Rs. 12,01,685.

SPECIAL ACTIVITIES

Among special institutions and activities of the University particular mention may be made of the Oriental Research Institute, the University Library and Publications and Extension Lectures. The Oriental Research Institute is engaged in collecting, conserving and editing manuscripts of important works in Sanskrit and Kannada. It now has a total of nearly 22,311 manuscripts and printed books.

The University Library is a large and growing institution, with a very well-equipped reading room and over 75,100 books on the shelves. It has been included in the list of Depository Libraries of the Carnegie Endowment for International Peace. The Library is organised under a University Librarian.

Most Colleges have hostels attached to them, and these institutions with their reading rooms and sports facilities are important centres of the social life of students.

The University also provides a unit in the Scout Movement in the State, and has an organisation with its own District Commissioner at the head; and the benefits of scouting as a field of social service are secured for the members of the University.

(Unions and Associations form an important part of University life. There is a Union at every University centre in which teachers and students meet on common ground and take part in indoor games and serious or light intellectual contests. Many of the Unions undertake also philanthropic work such as collecting funds for the aid of poor students, besides welfare work like village improvement and spread of literacy).

A recent development has been the introduction of Free Canteens in most colleges for affording relief to those students who are compelled by lack of means to go without food for long hours during the working day. A liberal grant of about Rs. 20,000 a year, is provided for this purpose in the budget, and Canteen Committees in the various colleges administer the funds to the greatest possible advantage of needy students. The system has been working satisfactorily, and even better results could be expected when conditions of the supply of food-stuffs improve.

College Libraries.—Besides the above Libraries, each constituent and Intermediate College has its own library for the use of the students.

SCHEME OF FELLOWSHIPS

The Fellowships are awarded to persons who have given evidence of capacity to do research work. Junior members on the staff of the University are also eligible for selection.

PUBLICATION AND EXTENSION WORK

There is an Extension Lectures Committee which arranges an annual Programme. During each year a number of lectures are delivered in different parts of the State.

Under the auspices of the University Teachers' Association Extension Lecture camps are arranged each year in the interior parts of the State and Lectures are published in Kannada under the Extension Lectures Handbooks Series, for sale. These publications are in great demand.

The University encourages the publication of original works particularly in Kannada. The Kannada Publication Committee arranges for the publication of monographs in Kannada on such subjects as Science, History, Geography, Philosophy, Literature, Political Economy, Educa-

tion and Fine Arts so that teachers and others who know Kannada only may be able to continue their studies in the various branches of modern learning.

The Standing Committee for publications other than Kannada considers the question of publications other than Kannada.

BUDGET: PROVIDENT FUND

The employees of the University are subject to the State pension benefits.

A provident fund has been instituted for the benefit of the employees who are not in pensionable service.

The University is entirely supported by the Government of Mysore. The State Grant for the year 1956-57 is Rs. 46,00,000.

WOMEN'S EDUCATION

There are two institutions exclusively for women, the Maharani's College in Bangalore and the Maharani's College in Mysore. Home Science and Music as optional subjects for the Intermediate and Degree courses have been introduced in the Maharani's College for women, Bangalore and only music in the Maharani's College for women, Mysore.

STUDENTS INFORMATION BUREAU AND ITS ACTIVITIES

The work of the Bureau consists mainly in collecting information about courses of study in foreign Universities and answering enquiries from students of this University as well as other Universities

PROVISION FOR SAFEGUARDING HEALTH, MEDICAL INSPECTION, DISCIPLINE, ETC

Every student in the University is medically examined in every year during his stay in the University. The examination is carried out by a Medical Officer who submits a report of the results of his inspection to the University. "Repeat" examinations in special cases are undertaken at intervals at the request of the College Authorities. The results of the medical examinations are reported in individual forms and kept in the custody of the Medical Officer and the Principal.

DEGREES AND DIPLOMAS

The University offers the Bachelor's Degree in Arts and Science, the Honours Degree in Arts and Science, the Master's Degree in Arts and Science, the B.E. Degree in Engineering (Civil, Mechanical and Electrical), the M.B.B.S. Degree in Medicine and Surgery and the Degree of Bachelor of Education and D.Litt., D.Sc., Ph.D. Degrees. Sanction has been accorded to the Institutes of the following post-secondaries:—

Honorary Degrees of Doctor of Letters, Doctor of Science and Doctor of Laws (D.Litt., D.Sc., and LL.D.).—Where at a meeting of the

Academic Council not less than eight members recommend that an Honorary Degree be conferred on any person on the ground that he is, in their opinion, by reason of eminent position and attainments, a fit and proper person to receive such a Degree, and where their recommendation is supported by the Syndicate and accepted by not less than two-thirds of the members present at a meeting of the Senate and is confirmed by the Chancellor, the Senate shall confer the Honorary Degree on such a person, provided that in case of urgency the Chancellor may act on the recommendation of the Syndicate only.

ADMISSION

Students who have passed the Mysore S.S.L.C. examination satisfying the differential minima rules and those who have passed the Matriculation examination of an Indian University or other examination recognized by the University Council as equivalent thereto and satisfy the University Syndicate regarding their fitness for admission are eligible for admission to the Pre-University course.

Admission to a course of study for a Bachelor's Degree in Arts or Science is granted only to those who have passed the Pre-University Examination of this University or of any other Indian University, subject in the latter case to the approval of the University Syndicate in cases in which specific recognition has not been agreed to.

Admission to a course of study for the B.Ed. Degree is granted only to those who have taken the Bachelors' Degree in Arts, Commerce or Science in this or any other Indian University.

Admission to the course of study for the B.E. Degree is granted only to those who have passed the Pre-Professional Examination in Engineering of this University or an examination of this or any other University accepted by the University Syndicate as equivalent thereto or graduates in Arts or Science who have passed with Physics, Chemistry and Mathematics as optional subjects, or graduates with Honours having Mathematics and Physics for the optional subjects.

Admission to the course of study for the M.B.B.S. Degree is granted only to those who have passed the pre-Medical Examination of the University.

Admission to the pre-Medical course is granted only to those who have passed the Intermediate Examination in Science of this University with not fewer than two of the subjects Physics, Chemistry, Botany and Zoology or to graduates of this University who have passed with one or more of the above subjects or those possessing equivalent qualifications of other Universities accepted by the Syndicate.

Provision has been made for the admission to the M.B.B.S. Degree course of L.M.P. Diploma holders. They will be eligible for admission to the Final examination in three years and a half after admission.

Admission to a course of study for the Master's Degree in Arts or Science is regulated as follows:—

A graduate of this University with Honours shall pursue a course of studies in his major subject for one academic year from the date of his passing the Bachelor's degree examination at the end of which he will be permitted to present himself for the Master's Degree Examination in that subject.

Candidates for the Mysore S.S.L.C. Examinations who have been declared eligible for college courses of study or those who have passed any other examination accepted by the University Council as equivalent thereto shall be eligible for admission to the L.M.P. diploma course.

ADMISSION TO PRE-UNIVERSITY COURSE

Qualification for Admission to Pre-University Course.

No student shall be admitted to the Pre-University Course unless he shall have—

- (i) passed the Mysore Secondary School Leaving Certificate Examination, and obtained the minimum as hereinafter prescribed; or
- (ii) passed the Bangalore European High School Examination; or
- (iii) passed the Matriculation Examination of an Indian University or any other examination recognised by this University as equivalent thereto and satisfies the Syndicate as to his fitness for admission to the course chosen.

The following shall be the minima referred to in Regulation (i) above.

I. Compulsory Subjects

Minima.

- 40 per cent in English;
- 35 per cent in the Second Language;
- 35 per cent in Elementary Mathematics;
- 35 per cent in General Science, including Human Physiology;
- 35 per cent in History, Civics and Geography.

II. Optional Subjects

- 30 per cent in each division of a group in which there are divisions; and
- 35 per cent in the aggregate of the group.

For admission to the Pre-University Course with Optional Subjects from Group A or C under Part III in the University, a candidate should have passed the S.S.L.C. Examination as above, provided that for a

combination comprising Mathematics in the Pre-University Course, a candidate should have passed the S.S.L.C. Examination with Group B (Mathematics and Science).

For admission to the Pre-University Course with Optional Subjects from Group B under Part III in the University, a candidate should have passed the S.S.L.C. Examination as above taking optional Group B (Mathematics and Science).

Candidates for the Pre-University Course shall ordinarily select under Part II, the same language as the one offered at the S.S.L.C. or corresponding examination as a second language. The Syndicate shall have power to permit a change in special cases.

PRE-UNIVERSITY COURSE AND EXAMINATION

Length of the Course.

The course of study for the Pre-University Examination shall extend over a period of one academic year in a College maintained by or affiliated to the University.

Minimum Attendance.

A student shall be considered to have completed the attendance for the year, if he has attended three-fourths of the number of working periods in each of the subjects during the said year, and his conduct and progress have been satisfactory.

Condonation of Shortage of Attendance.

The Syndicate shall have power to condone shortage of attendance up to fifteen per cent on the recommendation of the heads of institutions.

Applications for the condonation of shortage of attendance shall be made to the Registrar in the month of February.

Course of Study.

The course of study leading to the Pre-University Examination shall comprise :—

Part I—English.

Part II—Any one of the following languages :

- (a) The Regional Language—Kannada ;
- (b) An Indian Language—Hindi, Tamil, Telugu, Malayalam, Marathi or Urdu ;
- (c) A Classical Language—Sanskrit, Arabic or Persian ;
- (d) A Foreign Language—French, Latin or German.

Part III—Optional Subjects : *Three* subjects from Group (A), or *three* subjects from Group (B), or Group (C).

Group (A) : History, Economics, Logic, Geography, A Selected Language*, Music, Mathematics and Commerce.

Group (B) : Mathematics, Physics, Chemistry, Botany, Zoology, Geology and Biology.

Group (C) : Home Science.

Part IV— General Education :

(a) General Science.

(b) Social Science.

Students of Group (A) shall offer (a) in Part IV, and students of Groups (B) or (C) shall offer (b) in Part IV.

Combinations of Optional Subjects.

Under Part III, the following are the approved combinations of Optional Subjects :—

Group (A) :

History, Economics, Logic

History, Economics, Geography

History, Economics, Music

History, Economics, A Selected Language

History, Logic, A Selected Language

History, Music, A Selected Language

History, Geography, A Selected Language

History, Geography, Commerce

Economics, Mathematics, Commerce

Economics, History, Commerce

Economics, Geography, Commerce

Group (B) :

Physics, Chemistry, Mathematics

Physics, Mathematics, Geology

Chemistry, Botany, Zoology

Chemistry, Botany, Geology

Chemistry, Zoology, Geology

Physics, Chemistry, Biology

Physics, Chemistry, Geology

Hours of Tuition Work per week.

The following shall be the number of hours allotted for teaching work per week in various subjects of study :

* The selected language shall be different from the one offered under parts I and II ; the course of study and the scheme of examination in any selected language shall be the same as under part II. A selected language shall be one of the following :

Kannada, Sanskrit, Hindi, Urdu, Arabic and Persian.

Part I—English :

4 hours inclusive of one hour for Composition.

Part II—Any other language :

4 hours inclusive of one hour for Composition and/or Translation.

Part III—Optional Subjects :

4 hours for each subject in Group (A), except Mathematics which shall have 5 hours inclusive of one hour for essay or problems, whichever is appropriate to the subject ;

5 hours for each subject in Group (B), inclusive of 2 hours for practical for subjects having practical work ;

15 hours for Group (C).

Part IV—General Education :

2 hours for either (a) or (b).

Pre-University Examination Scheme and Minima for a Pass.

The Pre-University Examination shall be held twice a year in four parts — Part I—English ; Part II—Language ; Part III—Optional Subjects ; and Part IV—General Education. The examination in Parts I, II and IV shall comprise one paper in each ; and the examination in Part III shall comprise three papers ; one in each of the optional subjects or three papers in Home Science. Each paper shall be of three hours duration and shall carry a maximum of 100 marks.

A candidate appearing for the Pre-University Examination for the first time shall apply for all the four parts of the examination. At subsequent appearances a candidate shall be permitted to appear for one or more parts in which he has failed to secure a pass.

No candidate shall be declared to have passed the Pre-University Examination unless he obtains not less than 35 per cent of the marks in each of the Parts I, II and IV, and 35 per cent in the aggregate of Optional Subjects under Part III, and also not less than 30 per cent in each of the subjects of the Optional Group.

Classification of Successful Candidates

The results of the examination shall be declared in three classes as follows :

First Class—Those who obtain not less than 60 per cent of the aggregate marks in all the four parts taken together ;

Second Class—Those who obtain less than 60 per cent but not less than 50 per cent ;

Third Class—Other successful candidates.

The names of the candidates who pass in the first and second classes shall be arranged in order of merit, and the names of those who pass in the third class shall be arranged in alphabetical order.

Candidates who pass the examination in parts shall not be classed.

A candidate for the Pre-University Examination shall be permitted to appear again for the examination in a new subject or subjects provided he has undergone the course of study prescribed in the subject or subjects for one Academic Year. He shall be declared to have passed the examination in the new subject or subjects, if he obtains not less than 35 per cent of the marks in each subject offered for the examination

INTERMEDIATE EXAMINATION

The course of study for the Intermediate Examination shall extend over two years.

At the Intermediate Examination in Arts, a candidate shall be examined in—

(1) *English*.—The examination shall comprise three papers on—

1. English Grammar. 2. Poetry and Drama. 3. Prose—Detailed and Non-detailed.

(2) *Second Language*.—One of the following languages :— Kannada, Urdu, Tamil, Hindi, Telugu, Sanskrit, Persian, Arabic, French, Latin, Malayalam, German, Russian, Italian and Spanish.

The examination shall comprise two papers as under :—

(a) *Indian Languages*,

(b) *Classical and Western Languages*.

Note.—(a) Indian Language.—

Kannada, Tamil, Telugu, Hindi and Urdu.

(b) Classical and Western Language.—

Sanskrit, Persian, Arabic, French and Latin.

(3) *Optional Subjects*.—Three of the following :—

A selected Language, History, Logic, Economics, Statistics, Geography, Mathematics, Physics, Chemistry, Biology, Political Science, Ethics, Social Science, Music, Psychology.

Provided that—

(i) A candidate taking Physics must take Mathematics ;

(ii) Not more than one of the last three subjects may be offered ;

(iii) The same language cannot be taken under both (2) and (3).

(iv) Candidates taking Statistics must take Mathematics.

The selected language shall be taken from Old and Middle Kannada, Modern Kannada, Tamil, Telugu, Urdu, Sanskrit, Hindi, Arabic, Persian (Old and Modern).

"A student who has passed the S.S.L.C. Examination with one of the Languages as an optional subject and does not desire to continue it as an optional subject may be permitted to take it as a Second Language."

At the intermediate Examination in Science, a candidate shall be examined in—

- (1) *English*—same as for the Intermediate Examination in Arts.
- (2) *Second Language*.—One of the following Languages:—Kannada, Urdu, Tamil, Telugu, Hindi, Sanskrit, Persian, Arabic, French, Latin, Malayalam, German, Russian, Italian and Spanish.
- (3) *Optional Subjects*.—One of the following groups:—
 - (i) Physics, Chemistry, Mathematics ; (ii) Physics, Mathematics, Geology ; (iii) Botany, Zoology, Chemistry ; (iv) Zoology, Chemistry, Botany ; (v) Geology, Zoology, Chemistry ; (vi) Botany, Zoology, Geology ; (vii) Physics, Mathematics, Economics ; (viii) Economics, Geology, Chemistry ; (ix) Economics, Geology, Geography ; (x) Mathematics, Economics, Geography ; (xi) Economics, Geography, Chemistry ; (xii) Geology, Geography, Chemistry ; (xiii) Mathematics, Statistics, Economics ; (xiv) Mathematics, Statistics, Social Science ; (xv) Mathematics, Statistics, Psychology ; (xvi) Mathematics, Statistics, Physics.

The examination shall comprise two papers in each division of the group.

(i) The Intermediate Examination in Arts and the Intermediate Examination in Science shall be held twice a year (in April and in September or October) in three parts—Part I, English ; Part II, Second Language ; and Part III, Optional subjects.

(ii) No candidate shall be declared to have passed the Intermediate Examination in Arts or the Intermediate Examination in Science unless he obtains not less than 35 per cent of the total number of marks in English, 35 per cent in the Second Language and 35 per cent in the whole group of optional subjects, and also not less than 30 per cent in each of the subject of the optional group.

The results of the examination shall be declared in three classes as follows:—1st class 60; 2nd class 50; 3rd class other successful candidates.

The period of study necessary to qualify for graduation shall be as noted below, and shall be subsequent to the date at which the student passes the Intermediate Examination of this University or an examination recognised as equivalent to it:—

B.A. and B.Sc.: Not less than 2 years.

B.A. and B.Sc. (Hons.): Not less than 3 years.

B.E. Not less than 4 years followed by a year's practical course.

M.B., B.S. Not less than 5½ years.

B.A. DEGREE

The course of study shall comprise English, a Second Language and three of the following subjects: English, Philosophy, a Classical Language, an Indian language, Politics, Economics, Sociology, History, Education, Mathematics, Geography, Biology, Physics, Chemistry, Botany, Zoology, Aesthetics, History of Civilization, Business Administration, Social Administration, Public Administration, which shall be taken in combinations approved by the Academic Council, from time to time.

Provided that not more than one of the last five subjects may be offered in any combination except when English is one of the optional subjects in the combination, in which case two may be offered.

The examination shall consist of two papers in English Composition, one paper in Second Language composition and Translation from English to Second Language or Translation in respect of classical Languages, and three papers in each of the three selected subjects.

The Second Language shall be selected from Kannada, Urdu, Tamil, Telugu, Hindi, French and Malayalam for Composition; and Persian, Arabic and Latin for Translation and Sanskrit for Texts and Translation. The Classical Language shall be selected from Old and Middle Kannada, Sanskrit, Pali and Prakrit, Persian (Classical), Arabic, Avestan and Pahlavi.

B SC. DEGREE

The course of study shall comprise English, a Second Language and one of the following groups:—(i) Mathematics, Physics, Chemistry; (ii) Botany, Zoology, Geology; (iii) Botany, Zoology, Chemistry; (iv) Physics, Mathematics, Geology; (v) Chemistry, Geology, Botany; (vi) Chemistry, Geology, Zoology; (vii) General Physiology, Chemistry, Zoology or Botany; (viii) Economics, Geology, Chemistry; (ix) Physics, Mathematics, Economics; (x) Experimental Psychology, Mathematical Statistics, Child Psychology and Educational Psychology; (xi) 1. Mathematics, 2. Mathematical Statistics and Mathematical Economics. 3. One of the following:—(a) Economics, (b) Sociology, (c) Psychology, (General and Experimental); (xii) Economics, Geology, Geography; (xiii) Mathematics, Economics, Geography; (xiv) Geography, Economics, Chemistry;

(xv) Geography, Geology, Chemistry; (xvi) Mathematics, Statistics, Geography; (xvii) Mathematics, Sociology, Geography.

The examination shall consist of two papers in English Composition one paper in Second Language Composition and Translation from English to Second Language or Translation in respect of Classical Languages and three papers in each of the three selected subjects.

BACHELOR'S DEGREE EXAMINATIONS IN ARTS AND SCIENCE

The examinations for the Bachelor's Degree in Arts and Science shall be held in three parts as under:—

- (i) Compulsory English—pass 35 per cent.
- (ii) Second Language—pass 35 per cent.
- (iii) Optional Subjects—pass 35 per cent. in each subject and 40 per cent. of the aggregate of the three subjects.

The results in each part shall be declared in three classes as follows:—First Class 60 per cent, Second Class 50 per cent, Third Class other successful candidates.

THREE YEAR DEGREE COURSE — B.A. & B.SC.

REGULATIONS

Preamble

The Three-Year Degree Courses in Arts, Science and Commerce are being instituted by the University of Mysore under the reorganised scheme of University education. The admission to these courses is open to students who have passed the Higher Secondary Examination of the Mysore Secondary Education Board or any other examination recognised by the University as equivalent thereto.

As a transitory measure, students, who have passed the Pre-University Examination of this University or any other University recognised by the Mysore University, are eligible for admission to various degree courses, subject to regulations laid down therefor.

Students passing the Degree Examinations will be eligible for admission to the Two-Year Master's Degree courses to be instituted subject to the regulations thereunder.

B.A. & B.SC. DEGREE COURSES

Admission to Degree Courses

1. No Student shall be permitted to study for the Three-Year B.A. or B.Sc. Degree unless he has passed the Pre-University Examination of this University or any other University, subject in the latter case to the approval of the University Syndicate.

Length of Course

2. The course of study for the B.A. or B.Sc. Degree Examination shall extend over a period of three academic years in a College maintained by or affiliated to the University.

Minimum Attendance

3. In the case of the degree courses, each year shall be taken as a unit for purposes of calculating attendance; and a student shall be considered to have completed the attendance for the year, if he has attended not less than three-fourths of the number of working periods in each of the subjects comprised in the course and his progress and conduct have been satisfactory.

Condonation of shortage of attendance

4. The University Syndicate shall have power to condone shortage of attendance up to 15 per cent on the recommendation of the heads of all colleges.

Application for condonation of shortage of attendance shall be made to the Registrar in the month of February each year.

Correspondence of subjects offered

5. No candidate shall offer a subject at an examination for the Bachelor's Degree in Arts or Science unless he shall have passed the Pre-University examination in the corresponding subject, if any; but the University Syndicate shall have power to grant exemption from this rule in special case.

Course of study

6. The course of study leading to the Degree of Bachelor of Arts or Bachelor of Science shall comprise the following.

Part I: English;

Part II: Any one of the following languages.

- (a) The Regional Language—Kannada;
- (b) An Indian Language—Hindi, Tamil, Telugu, Malayalam, Marathi or Urdu.
- (c) A Classical Language—Sanskrit, Arabic, Persian.
- (d) A Foreign Language—French, Latin or German.

Part III: *Optional Subjects.*

Two Major subjects under Group (A), or Home Science under Group (B) for B.A. Degree.

or

Two under Group (C) for B.Sc. Degree along with one suitable Minor subject in each case selected from Group (D), in combinations approved by the Academic Council from time to time.

Group (A): Any two for B.A. Degree—

English, An Indian Language, A Classical Language, History, Geography, Economics, Political Science, Philosophy, Socio-

logy, Journalism, Music, Public Administration, Psychology, Mathematics, Statistics, Indology.

Group (B) : Home Science for B.A. Degree—

Group (C) : Any *two* for B.Sc. Degree—

Mathematics, Physics, Chemistry, Geology, Zoology, Botany, Statistics, Psychology.

Group (D) : *One* Minor subject out of the following:—

English, An Indian Language, A Classical Language, History, Geography, Economics, Politics, Philosophy, Sociology, Journalism, Music, Psychology, Mathematics, Statistics, Archaeology, Physics, Chemistry, Geology, Zoology, Botany, Public Administration, Anthropology, Philology, Pali and Prakrit.

The combination to be provided for in a College in any year shall be determined by the Syndicate on the recommendations of the Principals of Colleges.

Part IV : *General Education* :

(a) General Science in B.A. Degree Course provided Social Science is offered under Home Science.

(b) Social Science in B.Sc. Degree Course.

Hours of tuition per week

7. The following shall be the number of hours of tuition per week in various subjects of study.

Part I : English 4 hours in the First two years.

Part II : Any other Language 4 hours in the First two years.

Part III : Optionals in the First and Second years.

(a) 6 hours for each of the *two* Major subjects under Group (A) or (C).

The hours allotted in the Major subjects include the hours for practical, essay or problems whichever is appropriate to the subject ; 12 hours for Home Science under Group (B) '.

(b) 3 hours of lecture or 2 hours of lecture and one practical of 2 hours in the Minor subject.

In the Third Year—

12 hours (Inclusive of the hours for practical, essay or problems as the case may be) for each of the two Major subjects.

Under group (A) or (C) ; 24 Hours for Home Science under Group (B).

Part IV : *General Education* :

2 hours for either (a) or (b) in the First and Second Years of the course.

Note—The course in English (Part I) shall be such as to provide students with sufficient knowledge of English language only.

B.A. AND B.SC. DEGREE EXAMINATIONS

Scheme of Examination.

8. (1) The First Examination shall be conducted at the end of the Second Year of the course consisting of two papers in English under Part I, two papers in a Language under Part II, two papers or one paper and one Practical in the Minor subject under Part III and one paper in General Education.

(2) The Final Examination shall be conducted at the end of the Third Year of the course consisting of four papers or three papers and one practical in *each* of the two Optional subjects selected from the Major Groups. Home Science, will have six papers and two practicals.

(3) Each paper shall be of *three* hours duration with a maximum of 100 marks.

Appearance for First and Final Examinations.

9. (a) Candidates for the First and Final Examinations shall apply for all the parts in each examination when appearing for the first time.

(b) The First and Final Examination shall be held twice a year.

Minima for a Pass.

10. (a) No candidate shall be declared to have passed in Part I unless he obtains not less than 35 per cent of the marks in the aggregate.

(b) No candidate shall be declared to have passed in Part II unless he obtains not less than 35 per cent of the marks in the aggregate.

(c) No candidate shall be declared to have passed in Part III unless

(1) he obtains not less than 35 per cent of the aggregate marks in the Minor subject ;

(2) he obtains not less than 35 per cent of the total marks in each of the two Major subjects with 40 per cent of the aggregate marks in the *two* subjects, and

(3) he obtains not less than 40% of the aggregate marks in Home Science.

(d) No candidate shall be declared to have passed in Part IV unless he obtains not less than 35 per cent of the marks in the subject.

(e) Under Part III a candidate passing either the Minor or the Major, but not completing the Part, shall be exempted from further appearance in the one in which he has obtained the passing minimum.

Classification of successful candidates.

11. Successful candidates at the Final Examination shall be classed in each of the Parts I, II and III on the basis of the aggregate marks in each Part taking into account also the marks in that Part at the First Examination, as follows :

First Class : Those who obtain not less than 60 per cent of the aggregate marks in the Part.

Second Class : Those who obtain less than 60 per cent but not less than 50 per cent.

Third Class . Other successful candidates.

The names of those who pass in the First or Second Class shall be published in the order of merit, and the names of those who pass in the Third Class, shall be published in alphabetical order.

Reappearance for the Degree

12. (a) No candidate who has been declared to have passed in Part or Parts of the First or Final Examination shall be permitted to appear again in the same part or parts.

(b) A candidate who has passed the Final Examination in any group of Optional and minor subjects under Part III may be permitted to appear at a subsequent examination for the same degree in a different group of Optional and minor subjects under conditions to be prescribed by the University.

B.A. HONOURS DEGREE

The course of study shall comprise English, a Second Language and one of the following as the major subject with a suitable minor subject :

English, Kannada, Sanskrit, Persian, Arabic, Urdu, Philosophy, History, Politics, Economics, Indology.

The Examination shall consist of two papers in English Composition, one paper in Second Language Composition and Translation, eight papers in major subject and four papers in minor subject.

Provided that in the case of Sanskrit and English there shall be nine papers in the major subject and three papers in the minor subject.

B.Sc. HONOURS DEGREE

The course of study shall comprise one of the following optional groups of subjects consisting of a major subject and a minor subject, together with English and a Second Language :—

- (1) Mathematics (Major) with two out of a prescribed list of special subjects and Physics as Minor subject.
- (2) Statistics (Major) with two out of a prescribed list of special subjects and Economics or Experimental Psychology or Physics as Minor subject.

- (3) Physics (Major) including Mathematical Physics and Chemical Physics with Mathematics as Minor subject.
- (4) Chemistry (Major) including Plant Chemistry or Colloid and Capillary Chemistry with Physics as Minor subject.
- (5) Geology (Major) with Zoology or Botany or Chemistry as Minor subject.
- (6) Zoology (Major) with Botany or Geology or Chemistry as Minor subject.
- (7) Botany (Major) with Zoology or Geology or Chemistry as Minor subject.
- (8) Experimental Psychology (Major) with Child Psychology, Educational Psychology and Mathematical Statistics as Minor subject.
- (9) Economics (Major) with Advanced Statistics, Mathematical Economics and Social Measurements as Minor subject.

The examination shall consist of one paper in English Composition, one paper in Second Language Composition and Translation and papers in the optional subject as under :—

		Final (Major)	Preliminary (Minor)
(a) Mathematics		9	3
Statistics	. . .	9	
Physics	.. ..	9
Chemistry	. . .	9	
Botany	.. ..	9
Geology	. . .	9	
Zoology	.. ..	9
(b) Experimental	. . .	8	4
Psychology	.. ..	
Economics	.. ..	

HONOURS DEGREE EXAMINATIONS

The Honours Degree Examinations shall be taken in two parts—

- (a) the Preliminary Examination at the end of the second year ; (b) the Final Examination at the end of the third year.

- (a) The Preliminary Examination shall consist of the following three parts :—

- (i) English Composition—2 papers for B.A. (Hons.) ; 1 paper for B.Sc. (Hons.)
- (ii) Second Language—Composition or Translation—1 paper.
- (iii) Minor Subject—(1) Kannada, Persian, Arabic, History, Philosophy, Economics (B.A. and B.Sc.), Experimental Psychology—4 papers in each case. (2) English, Sanskrit,

Mathematics, Physics, Chemistry, Geology, Zoology, Botany
—3 papers in each case.

- (b) The Final examination shall consist of the remaining.
- (c) A candidate for the Honours Degree shall not appear for either the Preliminary or the Final Examination later than five academic years after admission to the first year Honours class; nor shall be permitted to undergo the complete Final Examination for Honours more than once.

A candidate who fails in the Preliminary Examination may be allowed to proceed to the Final Year course, in which case he shall take along with the Final Examination such part or parts of the Preliminary Examination as he may have failed in. Until such candidate passes in the Preliminary Examination his results in the Final Examination shall not be declared.

The classification in the Honours Examination shall be determined on the results of the Final Examination, only a pass being declared in the Preliminary Examination.

No candidate shall be declared to have passed in any part of the Preliminary Examination unless he obtains not less than 35 per cent of the aggregate marks in that part.

No candidate shall be declared to have passed the Final Examination for the Honours Degree in an Arts subject unless he obtains not less than 40 per cent of the total marks in the examination.

No candidate shall be declared to have passed the Final Examination for the Honours Degree in a Science subject, unless he obtains not less than 35 per cent of the aggregate marks in each group and 40 per cent of the total marks in the whole examination (including class work and class examination).

The results of the Final Examination shall be declared in three classes as follows:—

First Class	..	..	60 per cent.
Second Class	..	..	50 per cent.
Third Class	..	..	Other successful candidates.

MASTER'S DEGREE

(a) *Master of Arts*.—A candidate for the degree of Master of Arts shall pursue a course of study in one of the following subjects:—

English, Kannada, Sanskrit, Persian, Urdu, History, Politics, Economics, Philosophy, Psychology.

(b) *Master of Science*.—A candidate for the degree of Master of Science shall pursue a course of study in one of the following subjects:—

Mathematics, Statistics, Physics, Chemistry, Botany, Zoology, Geography, Psychology, Economics.

Candidates who have passed the Honours Degree Examination of this University and candidates from other Universities possessing qualifications considered equivalent by the University Council shall be eligible for admission to the Course.

A candidate who has passed the Honours Degree Examination or other equivalent examination shall pursue a course of studies in his major subject for not less than one academic year after passing the Bachelor's Degree Examination at the end of which he will be permitted to present himself for the Master's Degree Examination in that subject.

The examination for the Master's Degree shall consist of four papers and a *viva voce* Examination.

A dissertation may be offered in place of one of the papers.

In the case of Experimental Science subjects a Practical Examination shall replace one of the papers.

B. Ed.

A candidate for the degree of Bachelor of Education shall have taken the Bachelor's Degree in Arts, Science or Commerce in this University or a corresponding degree of any other University accepted by the University Council as equivalent thereto, and have attended for a year the prescribed course of study in the University after having passed the B.A., B.Sc., or B.Com. Degree Examination.

The course of study for the Degree of Bachelor of Education shall extend over one year at the conclusion of which there shall be an examination comprising the subjects mentioned below :—

Group 'A' (Theory Part) :

- (i) Principles and Practice of Education.
- (ii) Educational Psychology and Mental and Educational Measurements.
- (iii) Educational Administration, Organisation and School Management.
- (iv) Methods of Teaching : two of the following subjects :—
English, Kannada, History, Geography, Physical Science, Biological Science, Mathematics.

(v) One of the following additional subjects :—

- | | |
|------------------------|----------------------------|
| (a) Physical Education | (d) Adult Education |
| (b) Basic Education | (e) Visual Education |
| (c) Nursery Education | (f) Experimental Education |

(vi) Class records in :—

- (a) Methods of Teaching Special Subjects
- (b) Additional Subjects.

Group 'B' (Practice in Teaching) :

- (a) Teaching of the two special subjects selected under Group A (iv).
- (b) Class Work relating to Practice of Teaching.

Note.—No separate minimum will be required in respect of marks in Class Records in Group A or Class Work in Group B. These Class marks will count towards the aggregate of Group A or Group B as the case may be.

M. Ed.

A candidate for admission to the M.Ed. Course shall have taken the B.Ed. Degree of this University or a corresponding Degree of any other University accepted by the University Syndicate as equivalent thereto.

The course may be taken after the B.Ed. Degree or any equivalent Degree after an interval of not less than one year spent in teaching or supervision in recognised schools.

Duration of the Course

The M.Ed. Degree shall be awarded on the basis of :

(A) A written examination and *viva-voce* examination :—

The duration of the Course shall be one academic year for full-students who will be required to put in attendance for at least 4 hours a day in the College. Members of the staff of recognised educational institutions in Mysore City may take the course as part-time students. The duration of the course in their case shall be two years and they will be required to put in attendance for at least 2 hours a day.

Or

(B) A thesis and a *viva-voce* examination :—

- (a) Only such persons as have at least 5 years' experience in recognised educational institutions shall be permitted to take the M.Ed. by thesis.
- (b) The candidate shall prepare the thesis in any approved subject under the direction of a person appointed by the University.
- (c) In case of full-time students, the duration of the course shall be not less than one academic year and in the case of part-time students the duration of the course shall be not less than two years. Only members of the staff of recognised educational institutions in Mysore City shall be eligible to work as part-time students.

COURSE OFF STUDY AND SCHEME OF EXAMINATION

A. The subjects of study for the written examination and the scheme of examination shall be :

(1) Compulsory :

1. Advanced Educational Psychology—1 paper—100 Marks.
2. Problems of Indian Education—1 paper—100 Marks.

(2) Optional (Any two of the following) :

1. History of Education—1 paper—100 Marks.
2. Comparative Education—1 paper—100 Marks.
3. Educational Administration and Organisation—1 paper—100 Marks.
4. Experimental Education and Educational Statistics—1 paper—100 Marks.

A dissertation may be presented in lieu of one of the subjects and it shall deal with a significant part of the subject. The dissertation shall carry 100 marks.

The *viva voce* examination shall carry 100 marks. Each written paper shall be of three hours' duration.

The candidates shall be declared to have passed the M.Ed. Degree Examination if they obtain not less than :—

- (a) 40% in the four papers put together or 40% in three papers plus the dissertation,
- (b) 40% in *viva-voce*, and
- (c) 50% in the aggregate including the *viva voce* examination.

B. In the case of examination by thesis and *viva-voce* the University Syndicate shall in consultation with the Board of Studies in Teaching appoint a Board of three examiners one of whom shall be a person under whose direction the thesis was prepared. The Board of Examiners shall hold a *viva-voce* examination and if thesis is accepted after the *viva-voce* the candidate shall be awarded the M.Ed. Degree. If the thesis is of outstanding merit, the M.Ed. Degree with distinction shall be awarded.

General :—

In all other matters, rules relating to the Master's Degree Examination in other subjects shall apply to the M.Ed. Degree Examination also.

B.E. DEGREE (OLD SCHEME)

Students who have passed the Intermediate Examination in Science of this University with Physics, Chemistry and Mathematics as optional subjects shall be eligible for admission to the course of studies leading to the Degree of Bachelor of Engineering.

Students who have passed the B.Sc. Degree Examination with Physics, Chemistry and Mathematics as optionals and those who have passed the B.Sc. Honours with Physics or Chemistry or Mathematics as major subjects shall be eligible for admission to the course of studies leading to the Degree of Bachelor of Engineering.

B.Sc. Pass and B.Sc. Honours graduates so admitted to the First Year B.E. Class shall, at their option, be exempted from taking the following subjects in the First Examination in Engineering:—

Exemptions.

B.Sc. (Physics, Chemistry and Mathematics Optionals)	1. Physics Theory 2. Physics Practical 3. Chemistry Practical 4. Algebra and Calculus 5. Analytical Geometry and Trigonometry.
B.Sc. (Honours) Physics or Mathematics.	1. Physics Theory 2. Physics Practical 3. Algebra and Calculus 4. Analytical Geometry and Trigonometry.
B.Sc. (Honours) Chemistry.	1. Physics Theory 2. Physics Practical 3. Chemistry Practical.

Graduates from other Universities with similar qualifications may also be given a corresponding exemption as detailed above.

Students availing themselves of the exemption shall not be classed and shall not be eligible for ranking.

Note.—Graduates not availing of the exemption will be governed by the Ordinance 110, for Pass, Class and Rank.

Admission for students from other Universities with similar qualifications shall be subject to the approval of the University Council in each case.

Candidates for the B.E. Degree shall be required to attend courses of study in the following subjects:—

FIRST YEAR

Common Course

(Civil, Mechanical, Electrical and Chemical Engineering)

1. Mathematics (Algebra, Trigonometry, Analytical Geometry, Elements of Differential and Integral Calculus, Mensuration, Elements of Mechanics); 2. Engineering Physics—Theory and Practice; 3. Engineering Chemistry—Theory and Practice; 4. Economics; 5. Building Materials; 6. Metallurgy and Elementary Mechanical Engineering; 7. Freehand, Model and Geometrical Drawing; 8. Surveying—Theory and Practice; 9. Workshop—Practice.

SECOND YEAR

(i) Civil Engineering

1. Mathematics; 2. Applied Mechanics; 3. Hydraulics; 4. Mechanical Engineering; 5. Electrical Engineering; 6. Machine Drawing; 7.

Geology—Theory and Practice ; 8. Workshop—Theory and Practice ; 9. Applied Mechanics Laboratory ; 10. Mechanical Laboratory ; 11. Electrical Laboratory ; 12. Survey Practice.

(ii) *Mechanical Engineering*

1. Mathematics ; 2. Applied Mechanics ; 3. Hydraulics ; 4. Civil Engineering ; 5. Electrical Technology ; 6. Machine Drawing ; 7. Building Drawing ; 8. Machine Design ; 9. Applied Mechanics Laboratory ; 10. Workshop—Theory and Practice ; 11. Surveying—Theory and Practice.

(iii) *Electrical Engineering*

1. Mathematics ; 2. Applied Mechanics ; 3. Hydraulics ; 4. Civil Engineering ; 5. Electrical Technology ; 6. Machine Drawing ; 7. Building Drawing ; 8. Machine Design ; 9. Applied Mechanics Laboratory ; 10. Workshop—Theory and Practice ; 11. Surveying—Theory and Practice.

THIRD YEAR

(i) *Civil Engineering*

1. Mathematics ; 2. Applied Mechanics and Graphic Statics ; 3. Building Construction ; 4. Architecture ; 5. Building Drawing and Estimating ; 6. Irrigation ; 7. Sanitary Engineering ; 8. Surveying—Theory and Practice

(ii) *Mechanical Engineering*

1. Mathematics ; 2. Applied Mechanics and Graphic Statics ; 3. Theory of Direct Current Machinery ; 4. Heat Engines ; 5. Workshop Theory ; 6. Machine Design ; 7. Machine Drawing ; 8. Workshop Practice ; 9. Mechanical Laboratory ; 10. Electrical Laboratory and Drawing.

(iii) *Electrical Engineering*

1. Mathematics ; 2. Applied Mechanics and Graphic Statics ; 3. Heat Engines ; 4. Theory of Direct Current Machinery ; 5. Hydraulic Machinery ; 6. Machine Drawing ; 7. Electrical Drawing ; 8. Workshop—Theory and Practice ; 9. Mechanical Laboratory ; 10. Electrical Laboratory.

FOURTH YEAR

(i) *Civil Engineering*

1. Irrigation and Irrigation Drawing ; 2. Railways, Tunnels and Harbours ; 3. Roads and Bridges, and Bridge Drawing ; 4. Water Supply and Sanitary Engineering ; 5. Structural Design and Drawing ; 6. Testing of Materials Laboratory ; 7. Hydraulics Laboratory ; 8. Estimating, Specification and Engineering Economics ; 9. Surveying—Theory and Practice.

(ii) *Mechanical Engineering*

1. Heat Engines. 2. Hydraulic Engineering. 3. Power Plant Engineering and Drawing. 4. Mechanical Laboratory. 5. Workshop Practice.

6. Theory and Design of Machines. 7. Estimating, Specification and Engineering Economics. 8. Machine Drawing. 9. Theory of Alternating Current Machinery. 10. Electrical Laboratory. 11. Structural Design.

(ii) *Electrical Engineering*

1. Theory of Alternating Current Machinery. 2. Generation and Hydro-Electric Engineering. 3. Transmission and Distribution. 4. Electrical Machine Design. 5. Estimation, Specifications and Engineering Economics. 6. Traction and (Utilisation) Communication. 7. Structural Design. 8. Mechanical Laboratory. 9. Electrical Laboratory. 10. Electrical Drawing.

Candidates shall be required to pass four examinations, viz., the First Examination in Engineering at the end of the first year, the Second Examination in Engineering at the end of the second year, the Third Examination in Engineering at the end of the third year and the Final Examination for the B.E. Degree at the end of the fourth year.

No candidate shall be permitted to appear for the First Examination in Engineering after having failed four times in the examination.

No candidate shall be declared to have passed in any of the above examinations unless he obtains marks as follows:—

- (a) 50 per cent in each subject of the sessional work.
- (b) 35 per cent in each paper of the written examination.
- (c) 35 per cent in oral and practical.
- (d) 40 per cent in the aggregate.

Successful candidates who obtain not less than 60 per cent of the total marks shall be placed in the first class and their names shall be published in order of merit; the names of the other successful candidates shall be published in alphabetical order in the second class.

A candidate for any of the examinations failing to obtain the prescribed minimum in only one paper or Practical Examination, but obtains 40 per cent. in the aggregate may be permitted to appear again for the examination in that paper or Practical Examination only and that he be declared to have passed in the Examinations provided he obtains not less than 35 per cent. of the marks in that paper or practical Examination at the subsequent appearance.

A candidate for the First, Second and Third Examination in Engineering who fails in any one paper (Theory or Practical) but secures 40 per cent. on the aggregate, may be permitted to the next higher class and take the examination in the paper (Theory or Practical) in which he failed.

Such candidates will be declared to have passed in the previous examination, if they secure the required minimum of 35 per cent. in this paper (Theory or Practical) at their subsequent appearance.

The results of such candidates in the Second, Third or Final year Examination shall not be declared unless they pass in the paper left over from the previous year.

A candidate who has passed the Final Examination for the B.E. Degree in the Mechanical or Electrical Engineering branch may be permitted to qualify for the degree also in the Electrical or Mechanical Engineering branch, as the case may be, by attending the course of lectures for a period of not less than one academical year and passing an examination in the subjects studied as specified hereunder:—

(i) Mechanical Engineering students qualifying for an additional degree in Electrical Engineering shall undergo a course of studies in the subjects comprised in items 7 and 10 of the III Year Electrical Engineering course and items 2 to 6, 9 and 10 of the IV Year Electrical Engineering course and take the papers comprised in item 8 of the Third Examination in Engineering (Electrical) and Groups I and II of the Final Examination in Engineering (Electrical) except item 6.

(ii) Electrical Engineering students qualifying for an additional degree in Mechanical Engineering shall undergo a course of studies in the subjects comprised in items 4 and 5 of the III Year Mechanical Engineering course and items 1 to 8 of the IV year Mechanical Engineering course and take the papers comprised in items 6 and 7 of the Third Examination in Engineering (Mechanical), and Groups I and II of the Final Examination in Engineering (Mechanical).

B. E. DEGREE (New-Scheme)

Candidates for the B.E. Degree shall be required to attend the courses of study in the following subjects:—

First Year (Common course)

Mathematics (I. A and I. B)
 Physics (Theory and Practical)
 Chemistry (Theory and Practical)
 Engineering Materials I and II
 Applied Mechanics and Graphic Statics
 Mechanical Engineering I
 Electrical Engineering I
 Drawing
 Workshop Practice
 Survey (Theory and Practice) I.

Second Year (Common course)

Mathematics II
 Hydraulics
 Mechanical Engineering II
 Electrical Engineering II

Building Construction
Surveying (Theory and Practice) II
Strength of Materials and Graphic Statics II
Machine Drawing I
Building Drawing
Workshop Practice
Applied Mechanics — Laboratory
Electrical Laboratory
Mechanical Laboratory.

Third Year (Civil Engineering)

Mathematics III
Sanitary Engineering and Water Supply
Hydraulics and Hydraulic Machinery
Surveying III (Theory and Practice)
Construction
Engineering Geology (Theory and Practice)
Strength of Materials II and Theory of Structures I
Design and Drawing (Buildings)
Testing of Materials Laboratory.

Mechanical Engineering

Mathematics III
Heat Engines I
Workshop Theory I
Theory and Design of Machines
Structural Design
Hydraulic Machinery
Electrical Engineering III
Workshop Practice I
Machine Drawing II
Electrical Laboratory
Mechanical Laboratory I.

Electrical Engineering

Mathematics III
Electric and Magnetic circuits
Electrical Machinery I
Electronics
Structural Design
Theory and Design of Machines
Machine Tools
Heat Engines
Electrical and Machine Drawing
Machine Shop Practice
Mechanical Laboratory
Electrical Laboratory.

Final Year (Civil Engineering)

Irrigation

Theory of Structures II

Structural Engineering I and II

Surveying IV (Theory and Practice)

Estimating, Specifications and Engineering Economics

Railways, Tunnels and Harbours

Highway Engineering

Design and Drawing I and II

Hydraulic Laboratory

Project Surveying

Mechanical Engineering

Heat Engines II and III

Workshop Theory II

Machine Design

Thermal Power Plant

Water Power Engineering

Estimating, Specifications and Engineering Economics.

Elective I

Elective II

Machine Drawing III

Mechanical Laboratory II

Workshop Practice II

Project Drawing—Thermal and Water Power.

Electrical Engineering

Electrical Machinery II

Electrical Measurements

Generating Stations and Sub-Stations.

Transmission and Distribution

Utilisation of Electrical Power

Water power Engineering

Estimating, Specifications and Engineering Economics

Elective I

Elective II

Electrical Drawing

Electrical Laboratory II and III

Project Drawing — Electrical Power Thermal and Water Power.

NOTE.—A few Subjects are offered as Electives by each of the Departments (Mechanical, Electrical and Mathematics). Each student of the Final Year Electrical or Mechanical Class has to select TWO subjects as Electives, which may be from the Electives offered in his department or from subjects offered by other departments, excluding however compulsory subjects which he has already taken.

The choice of Electives should have the approval of the Principals of the respective Colleges.

Changes in Elective subjects and their contents shall be made with the approval of the Board of Studies in Engineering.

MASTER OF ENGINEERING

A candidate for the degree of Master of Engineering shall have qualified for the degree of Bachelor of Engineering. He shall be permitted to present himself for the Master's Degree in Engineering provided that he has enrolled himself as a student of the College of Engineering for one academical year and worked as directed by the Professor in charge of the subject concerned.

The examination for the degree of Master of Engineering shall comprise a thesis and a *viva voce* examination. The thesis shall carry a maximum of 400 marks, and the *viva voce* a maximum of 100.

No candidate shall be declared to have passed the M.E. Degree Examination unless he obtains not less than 40 per cent. of the marks in the thesis, 40 per cent. of the marks in the *viva voce*, and 50 per cent. of the aggregate marks for the whole marks shall be placed in the First Class.

THE PRE-MEDICAL COURSE

Before proceeding to the course of studies leading to the degree of Bachelor of Medicine and Bachelor of Surgery, a student shall be required to complete successfully the Pre-Medical course which shall extend over a period of six months and comprise the following subjects of study:—

Physics, Chemistry, Botany and Zoology.

Students who have passed the Intermediate Examination of this University with not fewer than two of the subjects comprised in the above course shall be eligible for admission to the course. Such of these as may have passed in Part III of the Bachelor's Degree Examination of this University with one or more of the subject comprised in the course shall be exempted from study and examination in the subject or subjects in which they have already passed the degree examination.

Admission of students from other Universities with similar qualifications shall be subject to the approval of the University Council in each case.

Candidates who hold the L.M.P. Diploma of Mysore or a qualification considered equivalent thereto shall also be eligible for admission to the course not later than two years after passing the Final L.M.P. Diploma Examination.

There shall be a Pre-Medical Examination at the end of the course. The examination shall comprise a written paper, a practical examination and a *viva voce* examination in each subject of study.

The examination shall be held twice a year, viz., in December and in May.

Candidates for the examination shall be required to produce certificates of (i) having undergone the prescribed course of study for six months in the Medical College in the subjects in which they appear, (ii) being not less than 17 years of age on the 1st January following the examination.

No candidate shall be permitted to appear for the Pre-Medical Examination after having failed four times in the examination.

No candidate shall be declared to have passed the examination unless he obtains in each subject not less than 35 per cent of the marks in the written examination and 35 per cent of the marks in the practical and the *viva voce* examination taken together and 50 per cent of the aggregate marks in the examination.

Successful candidates who obtain not less than 60 per cent of the maximum marks shall be placed in the first class.

M.B., B.S. DEGREE

The course of studies leading to the degree of Bachelor of Medicine and Bachelor of Surgery shall extend over five years.

(i) Candidates who have passed the Pre-Medical Examination of this University or who possess similar qualifications of other Universities which are accepted by the University Council as sufficient for this purpose, shall be eligible for admission to the course.

(ii) A candidate for admission must not be less than 17 years of age on the 1st of January of the calendar year for admission.

Candidates for the degree shall be required to attend courses of study in the following subjects:—

First Year and Second Year

Anatomy (including Embryology), Physiology (including Practical Physiology and Bio-Chemistry), Organic Chemistry.

Third Year

Pathology and Bacteriology (including Immunology), Minor Surgery, Materia Medica and Pharmacology, Medicine, Surgery, Hospital and Clinical Work.

Fourth Year

Medicine, Surgery and Surgical Pathology, Venereal Diseases, Midwifery, Gynaecology and Paediatrics, Ophthalmology, Forensic Medicine, Pathology and Bacteriology (including Immunology), Hygiene, Hospital and Clinical Work.

Fifth Year

Operative Surgery, Midwifery, Gynaecology and Paediatrics, Mental Diseases, Hospital and Clinical Work, Vaccination. Fever Hospital Clinical and Dental Surgery, Anaesthetics, Oto-Laryngology, One course of lectures and demonstration.

Provided that in respect of candidates who have passed the Final Examination for the L.M.P. Diploma, the course shall extend over three years and shall comprise the following.

Candidates shall be required to pass three examinations, namely, the First Examination at the end of the second year of the course, the Second Examination comprising three parts—Part I to be taken at the end of the third year, Part II to be taken at the end of the fourth year and Part III at the end of the fourth year or at any subsequent examination, and the final examination at the end of the fifth year, it being permissible for a candidate failing in Part I at the end of the third year to proceed to the fourth year course and appear in Part I again at the end of the fourth year.

A candidate who has already passed the Final Examination for the L.M.P. Diploma shall be permitted to appear for (a) the First M.B., B.S. Examination on production of a certificate of having passed the Pre-Medical Examination and a certificate of having undergone an approved course of studies of one academical year; (b) the Second M.B., B.S. Examination at the end of one academical year after passing the First M.B., B.S. Examination; and (c) the Final Examination at the end of a course of one academical year after passing the Second M.B., B.S. Examination.

No candidate shall be permitted to appear for the First Examination after having failed three times in the examination. The Final Examination and Part III of the Second Examination shall be held twice a year in December and in June, respectively.

(a) Candidates for the First Examination shall be required to have passed the Pre-Medical Examination and have undergone an approved course of studies in the Medical College for a period of not less than two years in Anatomy, Physiology and Organic Chemistry; and shall be examined in the following subjects—

- (i) Anatomy (including Embryology), (ii) Physiology (including Practical Physiology and Bio-Chemistry), (iii) Organic Chemistry.

(b) No candidate shall be declared to have passed the examination, unless he obtains not less than 50 per cent of the marks in the written examination and 50 per cent in the practical and oral examination together in Anatomy and in Physiology, and 35 per cent in the written examination and 35 per cent in the practical and oral examination together in Organic Chemistry and 50 per cent in the total for that subject. Successful candidates who obtain 70 per cent of the total num-

ber of marks shall be placed in the First Class. Candidates for the Second Examination shall be required to have passed the First M.B.,B.S. Examination and have been engaged in medical studies in the Medical College subsequent to passing the First M.B.,B.S. Examination as under :— Pharmacology—1 year, Pathology including Bacteriology—2 years, Hygiene—1 year, Ophthalmology—1 year, Forensic Medicine—1 year, the period being one year in respect of each subject in the case of L.M.P. Diploma holders ;

(c) The Second Examination shall be held in three parts :—

Part I—at the end of the third year comprising Pharmacology. Pass 50 per cent ; 1st Class 70 per cent.

Part II—at the end of the fourth year comprising Pathology including Bacteriology and Hygiene. Pass 50 per cent ; 1st Class 70 per cent.

Part III—at the end of the fourth year comprising Ophthalmology and Forensic Medicine. Pass 50 per cent ; 1st Class 70 per cent.

Candidates for the Final Examination shall be required to (i) have passed Parts I and II of the Second M.B.,B.S. Examination ; (ii) have been engaged in medical studies in the Medical College in the subjects of the examination for a period of not less than three years after passing the First M.B.,B.S. Examination and not less than one year after passing Parts I and II of the Second M.B.,B.S. Examination, and in the case of those who have passed the L.M.P. Diploma Examination for not less than one year after passing the Second M.B.,B.S. Examination ; (iii) and

(b) Candidates shall be examined in the following subjects :— (i) Medicine including Therapeutics and Paediatrics ; (ii) Surgery including Venereal Diseases ; (iii) Obstetrics and Gynaecology.

(c) No candidate shall be declared to have passed the Final Examination unless he obtains not less than 50 per cent of the maximum marks in the written examination and not less than 50 per cent of the maximum marks in the clinical, practical and *viva voce* examinations taken together, in each subject. Successful candidates who obtain not less than 70 per cent of the total marks in the examination shall be placed in the First Class.

THE DOCTORATE DEGREE

(i) A candidate may present himself for a Doctorate Degree under the following conditions :—

Doctor of Letters (D.Litt.)—

A Bachelor of Arts Honours of the University, five years after qualifying for the B.A. Honours Degree.

A Master of Arts of the University, four years after qualifying for the M.A. Degree.

Doctor of Science (D.Sc.)—

A Bachelor of Science Honours of the University, five years after qualifying for the B.Sc. Honours Degree.

A Master of Science of the University, four years after qualifying for the M.Sc. Degree.

Doctor of Engineering (D.E.)—

A Bachelor of Engineering of the University, five years after qualifying for the B.E. Degree.

A Master of Engineering of the University, four years after qualifying for the M.E. Degree.

Doctor of Science (D.Sc.)—Anatomy, Physiology—

An M.B.,B.S. of the University, five years after qualifying for the M.B.,B.S. Degree.

(ii) The degree may be conferred either on the basis of published papers or on a thesis specifically prepared for the degree in conjunction with published papers.

Ph.D. DEGREE

Doctor of Philosophy (Ph.D.)—

A Master of Arts or Master of Science of this or any other recognised University in India two years after qualifying for the Master's Degree.

A Bachelor of Arts or Bachelor of Science of this or any other recognised University in India, three years after qualifying for the B.A. Hons. or B.Sc. Hons.

A Master of Arts or B.Sc. Hons. graduate of this University may be permitted to work and prepare his thesis under recognised direction in any institution or laboratory in or outside Mysore.

A Master of Arts or B.Sc. Hons. graduate of any other recognised University is permitted to appear for the Ph.D. Degree of this University provided that he agrees to work within under the jurisdiction of the University of Mysore.

The Degree may be conferred on a thesis specifically prepared for the purpose and shall embody the results of research or investigation carried out by the candidate in an institution and under the guidance of a person approved in either case by the University.

INTERMEDIATE EXAMINATION IN COMMERCE

The course of study for the Intermediate Examination in Commerce extends over two years. It is open to candidates who have passed the Mysore S.S.L.C. Examination or any other equivalent examination with

one of the following subjects and shall have been declared eligible for admission to University courses of study.

S.S.L.C. of Mysore	.. .. .	Group 'C' (V)
S.S.L.C. of Mysore	.. .. .	Group 'A' or 'B'

Candidates for the Intermediate in Commerce examination shall be examined in three parts.

Part I—English: The examination shall comprise three papers on—

- (1) English Grammar, (2) Poetry and Drama, (3) Prose—Detailed and non-detailed.

Part II—comprises four papers on—

- (1) Economics I: Modern Industry
- (2) Economics II: Rural Economics
- (3) Economic Geography
- (4) Hindi.

Part III—comprises four papers on—

- (1) Accountancy and Commercial Arithmetic I
- (2) Accountancy and Commercial Arithmetic II
- (3) Administration
- (4) Commerce.

No candidate shall be declared to have passed the Intermediate examination in Commerce unless he obtains not less than 35 per cent of the total marks in English, 30 per cent in each of the subjects included in Parts II and III, and 35 per cent of the aggregate in Parts II and III.

BACHELOR'S DEGREE EXAMINATION IN COMMERCE

The course of studies leading to the Degree of Bachelor of Commerce shall extend over two years.

(i) The candidates who have passed the I.Com. examination of the Mysore University or any other Universities recognised as equivalent thereto and (ii) Graduates in Arts or Science of this University or any other Universities recognised by this and who have passed the Degree Examination with Economics as one of the optional subjects shall be eligible for admission but in the latter case they are required to pass the I.Com. examination in Accountancy and Commercial Arithmetic I and II at the end of the First Year. Candidates for the B.Com. Degree examination shall be examined in three Parts.

Part I—comprises four papers on—

- (1) English, (2) Commercial Law, (3) Trade and Statistics, (4) Business Organisation.

Part II—comprises three papers on—

- (1) Modern Economic Development, (2) Organisation and Finance of Industry, (3) Banking and Money Market.

Part III—comprises ten papers on each subject having two papers—

- (1) Advanced Accountancy and Auditing, (2) Advanced Banking and Banking Law, (3) Insurance, (4) Public Administration, (5) Economics of Transport.

No candidate shall be declared to have passed the B.Com. Degree examination unless he obtains not less than 35 per cent of the total marks in each subject comprised in the Part and 40 per cent of the aggregate of the subjects included in each Part.

B.COM. DEGREE COURSE

Length of Course

1. The course of study for the B.Com. Degree Examination shall extend over a period of three academic years in a college maintained by or affiliated to the University.

Admission to Degree Course

2. No student shall be admitted to the I Year B.Com. Class unless he shall have passed the Pre-University Examination of this University with Commerce as one of the subjects or an examination recognised by the Syndicate as equivalent thereto. The University Syndicate shall have power to grant exemption from this rule in special cases.

3. Graduates in Arts or Science of this University or of other Universities recognised by this University with Economics as one of the subjects of study shall be eligible for admission to the II Year B.Com. Class. They shall be exempted from taking the examination in Parts I and II and Modern Economic Development and Economic Geography of Part III of the B.Com Degree Examination.

Minimum Attendance

4. Each year shall be taken as a unit for purposes of calculating attendance and a student shall be considered to have completed the attendance for the year if he has attended not less than three-fourths of the number of working periods in each of the subjects comprised in the course and his progress and conduct have been satisfactory.

Condonation of shortage of Attendance

5. The University Syndicate shall have power to condone shortage of attendance up to 15 per cent on the recommendation of the Heads of Colleges—Applications for condonation of shortage of attendance shall be made to the Registrar in the month of February each year.

Course of study

6. The course of study leading to the Degree of Bachelor of Commerce shall comprise the following:—

Part I—(1) English—Modern English Prose; (2) Business Correspondence and precis writing.

Part II—(1) Kannada or Hindi *

Part III—(1) Economic Geography; (2) Modern Economic Development; (3) Statistics and Scientific Method.

Part IV—Group A: (1) Business organisation and Secretarial Practice; (2) Mercantile Law; (3) Economic Analysis; (4) Economic Problems and Policy. Group B: (1) Advanced Accounting and Auditing I; (2) Advanced Accounting and Auditing II and *any one* of the following special subjects:

(a) Advanced Banking and Banking Law I and II; (b) Economics of Transport I and II; (c) Insurance I and II; (d) Rural Economics and Co-operation I and II; (e) Industrial Organisation and Cost Accounts I and II; (f) Industrial Organisation and Labour Problems I and II.

Hours of tuition per week

7. The subjects included in Parts I, II and III shall be studied in the first two years and the subjects included in Part IV shall be spread over the three years. The scheme relating to the number of tuition hours per week in the various subjects shall be as follows:—

	<i>I Year</i>	<i>II Year</i>	<i>III Year</i>
Part I English—Modern English Prose	3	2	..
Business Correspondence and Precise Writing	3	2	.
Part II Kannada or Hindi	4	3	..
Part III Economic Geography	3	2	..
Modern Economic Development	3	2	..
Statistics and Scientific Method	3	2	..
Part IV Group A:			
Business Organisation and Secretarial Practice	2	..	3
Mercantile Law	..	2	3
Economic Analysis	..	2	3
Economic Problem and Policy	..	2	3
Group B:			
Advanced Accounting and Auditing I and II	2	3	6
Selected Subject	..	3	6
	—	—	—
	23	25	24
	—	—	—

* Under Part II those who have offered Kannada as a Second Language at the Pre-University shall be required to continue the said language, others shall take either Kannada or Hindi.

Scheme of Examination.

8. (1) The First Examination for B.Com Degree shall be held at the end of the Second Year of the course and it shall consist of two papers under Part I and one paper under Part II and three papers under Part III as indicated in Clause (6) above.

(2) The Final Examination for B. Com. Degree shall be held at the end of the Third Year of the course and it shall consist of four papers in Group A and 4 papers in Group B under Part IV as indicated in Clause (6) above.

(3) Each paper shall be of three hours duration with a maximum of one hundred marks.

First appearance for Examination.

9. Candidates for the First and Final Examinations appearing for the first time shall apply for all the parts in each examination.

Minima for a pass.

10. (a) No candidate shall be declared to have passed in Part I, unless he obtains not less than 35% of the marks in the aggregate.

(b) No candidate shall be declared to have passed in Parts II and III unless he obtains not less than 35% of the marks in each of the paper or papers included in such parts.

(c) No candidate shall be declared to have passed in Part IV unless.

(1) he obtains not less than 35% of the marks in each subject in Group A and Group B and

(2) 40% of the aggregate of the subjects under Part IV including both the groups.

11. A candidate who fails to secure the minima in any part or parts in the First Examination may be permitted to proceed to the Third Year Class and to take the examination in such part or parts along with the Final B.Com. Degree Examination. The results of such candidates in the Final Examination shall not be declared unless they complete the First Examination for the B.Com. Degree.

Classification of successful candidates.

12. Successful candidates at the First and the Final Examinations shall be classed in each of the Parts as follows:—

First Class:—Those who obtain not less than 60% of the aggregate marks in the Part.

Second Class:—Those who obtain less than 60% but not less than 50%.

Third Class:—Other successful candidates.

The names of those who pass in the First or Second Class shall be published in the order of merit and the names of those who pass in the Third Class shall be published in alphabetical order.

Reappearance for the Degree.

13. (a) No candidate who has been declared to have passed in a part or parts of the First or Final Examination shall be permitted to appear again in the same Part or Parts.

(b) A candidate who has passed the Final Examination in any one selected subject under Part IV may be permitted to appear at a subsequent examination for the same degree in any other special subject under conditions to be prescribed by the University.

B.COM. DEGREE COURSE

SYLLABUS

PART I—(1) English—MODERN ENGLISH PROSE

Two text-books of Modern English Prose are to be prescribed for general reading. The questions are to be so framed as to test the candidate's ability to express himself correctly and idiomatically in English on the subject matter of the books so prescribed.

Text-books to be prescribed each year.

PART I—(2) BUSINESS CORRESPONDENCE AND PRECIS WRITING

Drafting of reports.—Short reports to the Press: Drafting of Short speeches: Minutes of meetings: Advanced Commercial Correspondence; Precis writing of commercial matter: Essay on topics of current commercial or economic interests.

Books Recommended

1. Lydall: Precis writing,
2. Pink and Thomas: English Grammar, Composition and Correspondence.
3. Bahl and Nagamia: Modern Business Correspondence.
4. Mijamdar: Modern Business Correspondence.

PART II—KANNADA OR HINDI

The Course shall include the study of one text book in modern prose of the language selected and the text book to be prescribed for general reading. The questions shall include (i) translation from the selected language into English and *vice-versa* and (ii) Composition which shall be on the subject matter of the text book so prescribed.

PART III (1) ECONOMIC GEOGRAPHY

The influence of Physical features and climate on vegetable and animal life. Physical Geography as a basis for national and economic

development. Study of Principal commodities of Commerce, their sources and the conditions which determine their availability. Sources of power—Trade, Tariffs and Transport—Location of industries, Growth of Towns. A detailed study of the Economic Geography of the Principal countries—India, Great Britain, U.S.A., Germany, France, U.S.S.R., China and Japan.

The study is to include :—

- (a) Causes of Backwardness or Progress.
- (b) Distribution and density of population.
- (c) Economic resources, raw materials and sources of power.
- (d) Means of Communication and Trade routes.
- (e) Important commercial towns and chief ports.
- (f) Foreign Trade.

BOOKS RECOMMENDED

Dudley Stamp: Commercial Geography. An Intermediate Commercial Geography Vols. I and II.

Cotton: Hand book of Commercial information.

Kaji: Principles of General Geography.

Chisholm: Hand book of Commercial Geography.

Das Gupta: Economic Geography.

Mukherjee: An Economic and Commercial Geography of India.

PART III (2) MODERN ECONOMIC DEVELOPMENT

Formative forces and the main features of economic development of the leading countries since the Industrial Revolution: United Kingdom, U.S.S.R., U.S.A., Japan and India; Outstanding changes in Agriculture, Industry, Trade, Transport and Commercial Policy. Economic lessons of the Inter-War period; development of International Economic relations.

B.Sc. (AGRICULTURE) DEGREE

The course of studies leading to the Degree of Bachelor of Science in Agriculture shall extend over three years.

Candidates who have passed the Intermediate examination of the Mysore University with Chemistry as one of the optional subjects shall be eligible for admission and students from other Universities with similar qualifications shall also be eligible for admission subject to the approval of the University Council. A candidate for admission must not be less than eighteen years of age on the first January of the calendar year of admission.

Candidates for the B.Sc. (Agri.) Degree shall be required to attend courses of studies in the following subjects :—

FIRST YEAR

1. Agriculture—including Geology and Climatology.
2. Veterinary Science
3. Engineering—including Drawing and Surveying.
4. Botany.
5. Zoology.
6. Inorganic Chemistry and Principles of Organic Chemistry in a general manner.

There shall be one course of lectures with practical work in each of the above subjects.

SECOND YEAR

1. Agriculture.
2. Veterinary Science.
3. Agricultural Chemistry.
4. Agricultural Botany.
5. Agricultural Zoology.
6. Agricultural Engineering.

There shall be one course of lectures with practical work in each of the above subjects.

THIRD YEAR

1. Agriculture—inclusive of Animal Husbandry and Dairying, Economics and Farm Management.
2. Agricultural Chemistry.
3. Agricultural Botany and Mycology.

There shall be one course of lectures with practical work in each of the above subjects.

Candidates shall be required to pass three examinations, viz., First Examination in the B.Sc. (Agri.) at the end of the First Year, the Second examination in the B.Sc. (Agri.) at the end of the second year and the Third and Final examination at the end of the Third Year of the course.

No candidate shall be declared to have passed, unless he obtains not less than 40 per cent of the aggregate marks in each of the subjects. Successful candidates who obtain not less than 60 per cent. of the total marks shall be placed in the First Class in the order of merit and the other successful candidates in the Second Class in the alphabetical order.

B.Sc.(TEXTILES) DEGREE

The course of study leading to the Degree of Bachelor of Science in Textiles shall extend over three years with six months practical training in an approved Textile Mill or Factory.

Candidates who have passed (i) the Intermediate Examination in Science of this University with Physics, Chemistry and Mathematics as optional subjects ; (ii) the B.Sc. Degree examination with Physics, Chemistry and Mathematics as optional subjects and (iii) the B.Sc. (Hons.) Degree examination with Mathematics, Physics or Chemistry as the major subject shall be eligible for admission provided in the latter case candidates shall have taken Mathematics as an optional subject in the Intermediate course. Students from other Universities with similar qualifications shall also be eligible for admission subject to the approval of the University Council.

Candidates for the B.Sc. (Textiles) Degrees shall be required to attend the courses of study in the following subjects :—

FIRST YEAR

- (1) Mathematics
- (2) Physics
- (3) Physics Practical
- (4) Chemistry
- (5) Chemistry Practical
- (6) Descriptive Engineering
- (7) Machine Drawing
- (8) Workshop Practice
- (9) Textile Technology
- (10) Preparatory Process to Weaving.

SECOND YEAR

- (1) Mechanics of Textile Machinery
- (2) Drawing and Colour
- (3) Textile Technology
- (4) Weaving Mechanism
- (5) Preparatory Process to Weaving
- (6) Fabric Structure
- (7) Textile Testing
- (8) Commercial Subjects
- (9) Textile Chemistry
- (10) Dyeing Laboratory
- (11) Weaving Laboratory.

THIRD YEAR

- (1) Textile Technology
- (2) Commercial Subjects
- (3) Factory Organisation
- (4) Textile Testing Laboratory
- (5) Weaving Mechanism
- (6) Design and Ornaments

- (7) Applied Design
- (8) Fabric Structure
- (9) Preparatory Process to Weaving
- (10) Textile Chemistry
- (11) Dyeing and Printing Laboratories
- (12) Hosiery Manufacture
- (13) Hosiery Laboratory
- (14) Weaving Laboratory (workshop).

Candidates shall be required to pass three examinations, viz., First examination in the B.Sc. (Textiles) at the end of the first year, Second examination in the B.Sc. (Textiles) at the end of the year and the third and final examination in the B.Sc. (Textiles) at the end of the third year.

No candidate shall be declared to have passed any of the above examinations unless he obtains not less than 30 per cent. of the marks in each of the written examination and 30 per cent. of the marks in each oral or practical examination and 50 per cent. of the total marks in the examination. Successful candidates who obtain not less than 70 per cent. of the total marks shall be placed in the first class in order of merit and the other successful candidates in the Second Class.

B.L. DEGREE

The course of study leading to the Degree of Bachelor of Laws shall extend over two years and consists of two parts.

Part I—First Examination in Law and *Part II* Bachelor of Laws Degree examination.

Candidates who have qualified for the Degree of Bachelor of Arts or Bachelor of Science or Bachelor of Commerce or Bachelor of Agriculture of this University or a Degree of some other University accepted by the University Council as equivalent thereto shall be eligible for admission.

Candidates for the Degree of Bachelor of Laws shall be examined in the following subjects :—

First Examination in Law—

1. Jurisprudence.
2. Roman Law.
3. Contracts—
 - (a) General principles of the Law of Contracts including the Law of Agency and Specific Relief.
 - (b) The Law of Contracts including sale of goods, partnership Bailment, Suretyship and Negotiable Instruments.
4. Torts.
5. Criminal Law and Criminal Procedure Code (General provisions only.)

B.L. Degree Examination.

1. Law of Property :

(a) Transfer of Property Act—Sections 1—53 A (with a comparative study of the general principles of English Law of Real Property) Trusts Act and Easements Act.

(b) Transfer of Property Act—Sections 54—137 and Mysore Land Revenue Code.

2. Hindu Law.

3. Muhammadan Law and Indian Succession Act.

4. Constitutional Law — Indian and English.

5. Law of evidence, Civil Procedure Code and Limitaion Act (General Provision only).

6. Public International Law, (Law of Peace including the Constitution of the United Nations.)

No candidate shall be declared to have passed in the First Examination in Law or the B.L. Degree Examination unless he obtains not less than 40 per cent of the total marks, and not less than one-third of the marks in each Division of the examination.

DIPLOMA COURSES

DIPLOMA IN MEDICAL PRACTICE

The course of studies for the Diploma of Licensed Medical Practitioner shall extend over four years.

(a) Candidates who have passed the Mysore Secondary School Leaving Certificate Examination and been declared eligible for college courses of study or who have passed any other examination accepted by the University Council as sufficient for this purpose, shall be eligible for admission.

(b) Candidates for admission should be not less than 16 years of age on the first July, of the year of admission.

(c) Such of the candidates for any of the M.B.,B.S. Degree Examinations of this University as secure not less than 40 per cent of the aggregate marks in each subject comprised in the examination may be admitted to the corresponding higher class of the L.M.P. Diploma Course the correspondence being as follows:—

First Examination for M.B., B.S.: Third L.M.P. Class.

Second Examination for M.B., B.S.: Final L.M.P. Class.

Candidates for the Diploma of Licensed Medical Practitioner shall be required to attend the following courses of study:—

FIRST YEAR

Physics. Chemistry. Elements of Biology. Anatomy. Physiology.

SECOND YEAR

Anatomy. Physiology.

THIRD YEAR

Medicine. Surgery. Pathology and Bacteriology. Hygiene. Materia Medica. Mental Diseases. Hospital Work.

FOURTH YEAR

Medicine. Surgery. Venereal Diseases. Operative Surgery. Throat, Nose and Ear Diseases. Midwifery. Diseases of Women and Children. Ophthalmology. Forensic Medicine. Hospital Work.

Candidates shall be required to pass four examinations, viz., the first, the second, the third and the final. These examinations shall be held twice a year in April and in October.

No candidate shall be permitted to appear for the First Examination for the L.M.P. Diploma after having failed four times in the examination.

No candidate shall be declared to have passed in any of the above examinations unless he obtains not less than 40 per cent. of the marks in each subject. Of those who pass those who obtain not less than 70 per cent. of the total marks shall be placed in the First Class.

II. Language Diploma—in French, German, Hindi, Persian or Urdu.

The course of study for Language Diplomas shall extend over two years, at the end of which there shall be an examination. Candidates who have passed the Mysore S.S.L.C. examination and been declared eligible for College courses of study or the Matriculation examination of a Indian University or any other examination recognised by this University as equivalent thereto shall be eligible for admission.

The examination shall comprise two papers on

- (i) Text Books and Grammar
- (ii) Composition and Translation and Viva Voce.

III. Post-Graduate Diploma Course in Indology.

The course of study in Post-Graduate Diploma Course in Indology shall extend over one year at the end of which there shall be an examination. Only graduates are eligible for admission to the course. The examination shall comprise five papers on

- (i) History of Civilisation (Eastern and Western)
- (ii) Outlines of the Cultural History of Ancient India
- (iii) Outlines of Indian Literature
- (iv) Indian Art and Architecture
- (v) Religion and Philosophy of India.

No candidate shall be declared to have passed the Diploma examination unless he obtains not less than 50 per cent of the total marks

for the examination, and those securing not less than 70 per cent. shall be placed in the first class in the order of their marks.

FEES

The scale of fees for the courses of study for the several examinations of the University shall be as follows :—

A. Professional Courses—

Pre-Medical Courses :	Rs.
Whole course ..	120 for the course.
One subject ..	36 for the course.
Two subjects ..	66 for the course.
Three subjects ..	84 for the course.
M.B., B.S. Degree, whole ..	270 a year (payable in nine equal instalments.)
M.B., B.S. Degree, for the long term for the Final M.B., B.S. examination in respect of a failed candidate. ..	135
Fee for a supplementary course ..	42 for each subject.
Fee for L.M.P. Diploma holders admitted to the M.B., B.S. Degree ..	135 per year.
Diploma course ..	99 per year.
L.M.P. (for a course extending for six months or less) ..	30
B.E. Degree, whole course ..	198 per year.
Lectures only for students repeating the course ..	63 per year.
Lectures and drawing for students repeating the course ..	81 per year.
B.Ed. Degree ..	135 per year.
B.Ed Evening course ..	81 per year.
M.Ed. course ..	180 per year.
B.Com Degree ..	126
B.Sc. (Agri.) Degree ..	144
B.Sc. (Textiles) Degree ..	198
F.L. Degree ..	126
B.L. Degree ..	126

B. Arts, Science and Commerce Courses—

Intermediate Arts whole ..	90
Part I ..	31.50
Part II ..	18
Part III ..	54

(Plus Rs. 8 for Science Subjects)—

		Rs. Per year
Intermediate Science—		
Whole	..	90 plus 27 Lab. fees
Part I	..	31.50
Part II	..	18
Part III	..	54 plus 27 Lab. fees
For Failed I.Sc. candidates who are admitted for Lectures only		
Part I	..	31.50
Part II	..	13.50
Part III	..	54.00
Intermediate in Commerce		
Whole	..	90
Part I	..	31.50
Part II	..	40.50
Part III	..	40.50
B.A. Degree		
Whole	..	126
English	..	40.50
Second Language	..	27
Optionals	..	72
Pre-University (Arts)	..	90
Pre-University (Science)	..	90 plus 27 Lab. fees
B.A. (Hons.) Degree		
Whole	..	144
English	..	40.50
Second Language	..	27
Minor Subjects	..	54
Major Subjects	..	72
(In the 1st and 2nd year class)		
B.Sc. Degree		
Whole	..	126 plus 36 Lab. fees
English	..	40.50
Second Language	..	27
Optionals	..	72 plus 36 Lab. fees
B.Sc. (Hons.) Degree		
Whole	..	
English	..	40.50
Second Language	..	27
Minor Subjects	..	54 plus 36 Lab. fees
Major Subjects	..	72 plus 36 Lab. fees

		Rs. per year
(In the 1st and 2nd year class)		
M.A. Degree	..	144
M.Sc. Degree	..	144 plus 45 Lab. fees
Ph.D. Degree		
(a) Fee for Arts Subjects		80
(b) Fee for Science Subjects	..	120
(c) A student working the other Universities or Institutions shall pay a Registration fee of	..	50
Diploma course in a Language	..	54
Post-graduate Diploma in Indology	..	144

The scale of fees for admission to the several examinations of the University shall be as follows:—

(1) (a) Intermediate Arts or Science:—	Rs.	
Whole	..	36
Part I	..	12
Part II	..	8
Part III	..	10
(b) Pre-University		
Whole	..	24
Part I	..	8
Part II	..	8
Part III	..	16
Part IV	..	8
(2) (a) B.A. Degree, whole	..	50
(b) Compulsory English	..	12
(c) Compulsory Second Language	..	10
(d) Optional Subjects	..	36
(3) (a) B.A. (Hons.) Preliminary, whole	..	25
English	..	12
Second Language	..	8
Optional Subjects (Minor)	..	15
(b) B.A. (Hons.) Degree, Final	..	50
(4) (a) B.Sc. Degree, whole	..	60
(b) Compulsory English	..	12
(c) Compulsory Second Language	..	10
(d) Optional Subjects	..	48
(5) (a) B.Sc. (Hons.) Preliminary	..	30
English	..	12
Second Language	..	8
Optional Subject (Minor)	..	20
(b) B.Sc. (Hons.) Degree, Final	..	60

	Rs.
(6) M.A. Degree ..	100
M.Sc. Degree ..	100
M.E. Degree ..	100
M.Ed. Degree ..	100
M.L. Degree ..	100
(7) B Ed. Degree whole ..	50
Group B. Practice in Teaching only ..	25
Group A (Theory only) ..	30
(8) Pre-Medical Examination :—	
Whole examination ..	40
One subject only ..	15
Two subjects only ..	25
Three subjects only ..	30
(9) I. M.B.,B.S. , Part I ..	20
Part II one subject ..	20
Two subjects ..	30
II. M.B.,B.S., Part I, one subject only ..	20
Part II, whole ..	30
One subject only ..	20
Part III, whole ..	30
One subject, only ..	20
Final M.B., B.S., whole ..	60
One subject ..	25
Two subjects ..	40
(10) (a) First Examination in Engineering :—	
Whole ..	30
One subject ..	15
Two subjects ..	25
(b) Second Examination in Engineering :—	
Whole ..	30
One subject ..	20
Two subjects ..	25
(c) Third Examination in Engineering :—	
Whole ..	30
One subject ..	15
Two subjects ..	25
(d) Final Examination for the B.E Degree :—	
Whole ..	60
One subject ..	15
Two subjects ..	30

	Rs.
(11) D.Litt., D.Sc., or D.E. ..	200
(12) (a) Post-Secondary Diploma courses ..	25
One subject ..	10
(b) Post-graduate Diploma course in Tuberculosis	50
(13) Ph.D. Degree ..	150
(14) Intermediate in Commerce :—	
Whole ..	36
Part I ..	12
Part II ..	14
Part III ..	14
(15) B. Com. Degree Examination :—	
Whole ..	50
Part I ..	20
Part II ..	20
Part III ..	25
(16) (a) First Examination in B.Sc. Agriculture ..	25
One subject ..	15
(b) Second Examination in B.Sc. Agriculture, whole	25
Ordinance subject ..	15
(c) Final Examination in B.Sc. Agriculture ..	40
Ordinance subject ..	20
(17) (a) First Examination in Law, whole ..	50
Per subject ..	15
	(Subject to the maximum of Rs. 50).
.b) B.L. Degree — whole ..	60
Per subject ..	15
	(Subject to the maximum of Rs. 60).
(18) (a) First Examination for B.Sc. Textiles—	
Whole ..	25
One subject ..	15
(b) Second Examination for B.Sc. Textiles—	
Whole ..	25
One subject ..	15
(c) Final Examination for B.Sc. Textile—	
Whole ..	50
One subject ..	20

	Rs.
(19) Diploma course in a language ..	25
(20) Post-graduate Diploma course in Indology	40
(21) D.P.M. and D.M.P. Diplomas for each part ..	75
(22) Three year Degree—	
(a) B.A. II year: Whole ..	40
Part I .	15
Part II ..	15
Part III ..	15
Part IV ..	10
(b) B.A. II year: Whole ..	50
(c) B.Sc. II year: Whole ..	45
Part I ..	15
Part II ..	15
Part III ..	20
Part IV ..	10
(d) B.Sc. III year: Whole ..	60

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NAGPUR UNIVERSITY

INTRODUCTORY: CHARACTER OF THE UNIVERSITY

The first attempt to establish a University for the Central Provinces and Berar was made in the year 1914, when in the month of July, the Local Government appointed "The Central Provinces and Berar University Committee" to consider the question of the establishment of an independent University. It made its report in January 1915 embodying an elaborate scheme for a residential University with, however, power to affiliate external colleges. The Great War was then on and in view of its absorbing demands on the Administration, the consideration of the subject was put off. On the publication of the Sadler Commission's Report, a Committee was appointed in 1919, to formulate a fresh scheme after taking its recommendations into consideration. It soon submitted its report and action was taken upon it without loss of time. First planned in 1914-15 examined by several Committees of educationists, official and non-official, the University scheme at last emerged out of this prolonged gestation in the form of a concrete Bill. It was introduced in the Legislative Council in the August Session of 1922, and passed into law in March, 1923. The University was brought into existence on the 4th August, 1923.

The teaching of the University is conducted partly through the affiliated colleges and partly through the Teaching Departments of the University. The Act makes due provisions for its being made both unitary and affiliating. A list of the colleges in the University and of the Teaching Departments of the University is given below:—

A—COLLEGES.

- | | |
|--|--|
| <i>I. Maintained by Nagpur University
in Nagpur.</i> | <i>Standard upto which
maintained or admitted.</i> |
| 1. University College of Law, Nagpur. | LL.B. |
| 2. Laxminarayan Institute of Technology,
Nagpur. | B.Tech. M.Sc. (Tech.) |
| 3. University Training College, Nagpur. | Dip.T., B.T. and M.Ed. |
| <i>II. Maintained by the State Government
in Nagpur.</i> | |
| 4. Nagpur Mahavidyalaya, Nagpur. | M.A. |
| 5. College of Science, Nagpur. | D.Sc. |
| 6. College of Agriculture, Nagpur. | B.Sc. (Agr.) |

II. Maintained by the State Government Standard upto which maintained or admitted.

- | | |
|--|---|
| 7. Government Engineering College and Polytechnic, Nagpur. | Diploma in Engineering (including Architecture) and Arts and B.E. |
| 8. Medical College, Nagpur. | M.B.B.S., D.O., M.Sc. (Medicine), M.D., M.S., M.O. and Ph.D. in Medicine. |

In Amravati :

- | | |
|--|-------------------------|
| 9. Vidarbha Mahavidyalaya, Amravati. | M.A., M.Sc. |
| 10. Government Diploma Training Institute for Men, Amravati. | Dip. T. |
| 11. Government Diploma Training Institute for Women, Amravati. | Dip. T. |
| 12. Government Polytechnic, Amravati. | Diploma in Engineering. |
| 13. Government Post-Graduate Basic Training College, Amravati. | B.T. (Basic) |

In Akola :

- | | |
|-------------------------------------|----------------|
| 14. College of Agriculture, Akola. | B.Sc. (Agr.) |
| 15. Government B.T. College, Akola. | B.T. (General) |

III. Maintained by Private Bodies.

(i) At Nagpur :

- | | |
|--|--|
| 16. Hislop College, Nagpur. | M.A., B.Sc. Diploma and Certificate in Journalism. |
| 17. S. B. City College, Nagpur. | M.A. and B.Sc. |
| 18. Lady Amritbai Daga College for Women, Nagpur. | B.A. |
| 19. Dhanwate National College, Nagpur. | B.A. |
| 20. G. S. College of Economics and Commerce, Nagpur. | M.Com. |
| 21. The St.. Francis de Sale's College, Nagpur. | Inter-Arts. |

(ii) At Wardha :

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|--|--------|
| 22. G. S. College of Commerce, Wardha. | M.Com. |
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(iii) At Amravati :

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|-------------------------------------|------------------------|
| 23. Shri Shivaji College, Amravati. | M.A., LL.B. and M.Com. |
|-------------------------------------|------------------------|

(iv) At Akola :

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|----------------------------------|-------------|
| 24. Sitabai Arts College, Akola. | B.A., LL.B. |
|----------------------------------|-------------|

(v) At Washim :

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|--------------------------------------|------|
| 25. Rajasthan Aryan College, Washim. | B.A. |
|--------------------------------------|------|

(vi) At Khamgaon :

- | | |
|--|----------------|
| 26. G. S. College of Science and Arts, Khamgaon. | B.Sc. and B.A. |
|--|----------------|

III. Maintained by Private Bodies **Standard upto which maintained or admitted.**

(vii) At Yeotmal :

27. Amolakchand Mahavidyalaya, Yeotmal. B.A.

(viii) At Buldana :

28. The Arts College, Buldana. Inter-Arts.

B. — TEACHING DEPARTMENTS

IV. Teaching Departments of the University :

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|--|---|
| 29. The Department of Political Science. | M.A., Ph.D. |
| 30. The Department of Geology. | M.Sc., Ph.D. |
| 31. The Department of Bio-Chemistry. | M.Sc., Ph.D. |
| 32. The Department of Public Administration and Local Self-Government. | The Diploma in Local Self-Government, M.A. in Public Administration and Ph.D. |
| 33. The Department of Ayurveda. | Research in Ayurveda on Modern Scientific Methods. |
| 34. The Department of Ancient Indian History and Culture. | M.A., Ph.D. |
| 35. The Department of Pharmacy. | B.Pharm. |
| 36. The Department of Library Science. | Diploma in Library Science. |

The medium of examinations for the following examinations will be Hindi or Marathi, as the candidate may choose, with effect from the examinations of the years stated below, viz.—

<i>Examination.</i>	<i>Year.</i>
1. The Intermediate Examination in Arts (including Commerce).	.. .. 1951
2. The Intermediate Examination in Science	.. .. 1952
3. The B.A. (Pass) Examination.	.. .. 1955
4. The B.Sc. (Pass) Examination.	.. .. 1955
5. The B.Com. Examination.	.. .. 1953
6. The Examination for the Diploma in Teaching	.. .. 1951
7. The B.T. Examination.	.. .. 1950

For the present certain exceptions are permitted. The change of medium for other courses is also under consideration.

OFFICERS AND STAFF OF THE UNIVERSITY.

I. STATUTORY ADMINISTRATIVE OFFICERS:

Chancellor: ..

Shri Sri Prakash, B.A., LL.B., (Cantab), Bar-at-Law.

Vice-Chancellor :

Shri Justice K. T. Mangalmurti, B.Sc., LL.B., I.C.S.

Treasurer :

Shri R. M. Hazarnavis, B.Sc., LL.B.

Registrar :

Dr. M. S. Modak, M.A., Ph.D.

Deputy Registrar :

Shri V. Shankaran, M.A.

Assistant Registrars :

Shri M. R. Thakur, M.A., LL.B. (Administration)

Shri M. S. Nanyanan (Finance.)

Librarian :

Shri P. S. Phadke, B.A.

Consulting Engineer :

Shri V. R. Paranjpe, B.E.

II. OTHER ADMINISTRATIVE OFFICERS :*University Medical Officer :*

Shri P. U. Deshpande, M.B., B.S.

Officer-in-Charge of Physical Education :

Shri M. P. Major.

Superintendent of University Hostels :

Dr. P. S. Khankhoje.

Lady Warden, Sadaparva Hostel :

Shrimati Sundarabai Didolkar

Officer-in-Charge of Printing and Publication :

Shri K. K. Shrivastava, M.Sc.

Dean of the Faculties

<i>Arts</i>	..	Dr. D. G. Moses, M.A., Ph.D.
<i>Science</i>	..	Dr. N. G. Shabde, D.Sc.
<i>Education</i>	..	Shri M. A. Bambawale, B.Sc. (Hons.) (Lond.)
<i>Agriculture</i>	..	Dr. R. P. Asthana, M.Sc. (Agri.), Ph.D., D.I.C., F.A.Sc., F.B.S.
<i>Law</i>	..	Justice Shri S. P. Kotwal, B.A., LL.B.
<i>Medicine</i>	..	Dr. R. Nigam, M.D., M.S., F.R.C.S.
<i>Commerce</i>	..	Shri M. R. Tokhi, M.A., LL.B., B.Com.
<i>Engineering and Technology</i>	..	Dr. P. S. Mene, B.Sc., Ph.D., D.I.C., M.I.I. Chem. E.

Teachers of the University Departments.

- Department of Political Science** .. Dr. E. Raghavendra Rao,
 .. Professor of Political Science : (Vacant.)
- Reader** .. Shri P. J. Jagirdar, M.A.,
- Lecturers** .. Shri B. R. Purohit, M.A.
 Shri N. N. Shrivastava, M.A.
 Shri S. Ramnathan, M.A., (Part-time).
- Department of Bio-Chemistry** .. M. G. Chitnavis, Professor of Bio-Chemistry :
 Dr. M. C. Nath, B.Sc. (Jons.), M.Sc.,
 D.Sc. (Bio-Chemistry), F.N.I., F.R.I.C.
- Lecturers** .. Dr. C. H. Chakrabarty, M.Sc., Ph.D.
 Shri E. P. M. Bhattathri, M.Sc.
 (Honorary).
 Shri M. Razdon, M.Sc., (Honorary),
 Shri J. M. Khanade, M.Sc., (Honorary),
 Shri D. B. Motlog, M.Sc., (Honorary).
- Department of Geology** .. Professor Shri K. Sripada Rao,
 M.Sc., F.G.S., F.A.Sc., F.N.I.
- Lecturers** .. Shri P. G. Pande, M.Sc.,
 Shri Y. G. Dekate, M.Sc.,
 Shri P. H. Kulkarni, M.Sc.,
 Shri G. G. Deshpande, M.Sc.,
 Shri M. B. B. Giri, M.Sc., M.A.,
 Shri K. Suryanarayan, M.Sc.
- Department of Public Administration and Local Self-Government**
- Lecturers** .. Shri V. S. Murti, M.A.,
 Shri S. Ramanathan, M.A.,
 Shri E. V. Valsan, M.A.,
 Shri Vithal Singh, B.Sc. (Eng.),
 Shri Y. B. Mangrulkar, M.B., B.S.,
 D.P.H.
 Shri V. K. Bhedegaonkar, B.E., A.M.I.E.
 Shri M. L. D'Souza, G.D.A., I.A. & A.S.
- Department of Ayurveda**
- Reader** .. Shri V. B. Joshi, G.A.M.S.,
 Ayurvedacharya.
- Department of Ancient Indian History and Culture** .. Professor Dr. R. C. Majumdar, M.A.,
 Ph.D.

<i>Lecturers</i>	..	Shri A. J. Upadhyaya, M. M. V. V. Mirashi, M.A. (Part time), Kumari S. Kothari, M.A., Shri N. S. Dravid, M.A. Shri N. L. Rao, M.A.	,, ,, ,, ,,
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Department of Pharmacy

<i>Head of the Department</i>	..	Dr. A. S. Paranjape, M.D., C.H.B., D.T.M. & H.
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<i>Lecturers</i>	..	Shri K. S. Patel, M.Sc., Shri M. Razdon, M.Sc., Dr. M. C. Nath, D.Sc. (Part-time.) Shri C. V. N. Rao, M.Sc. Shri G. R. Shrivastava, M.Sc. Shri S. K. Sahu, B.Sc. (Tech.) Shri M. G. Kher, M.Sc., B.Sc. (Tech.) Shri S. N. Behere, M.Sc. Shri H. K. Khare, M Com. Dr. P. S. Khankhoje.	,, ,, ,, ,, ,, ,, ,, ,, ,, ,,
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Department of Library Science.

<i>Head of the Department</i>	..	Shri P. S. Phadke, B.A. Cert. in Lib. Sc.
<i>Lecturers</i>	..	Shri R. P. Hingorani, M.A., Dip. L. Sc. Shri D. M. Hote, B.A., Dip. in L.Sc. (Part-time) Shri P. P. Deshmukh, B.A, Dip. in L.Sc., (Part-time)

Principal of the University College of Law

Shri H. M. Thakar, B.A., LL.M.

Principal of the University Training College

Shri S. N. Tamhane, M.A., M.Ed., (in-charge)

*Director of the Laxminarayan Institute of Technology*Dr. P. S. Mene, B.Sc. (Hons.), Ph.D. (London), D.I.C.,
M.I.I. Chem.-E. (In-Charge.)**HEADS OF DEPARTMENTS OF STUDIES***(Included in the Faculty of Arts)*

<i>English</i>	..	Shri K. M. Vaidya, M.A.
<i>Philosophy</i>	..	Dr. D. G. Moses, M.A., Ph.D. (Cantab).
<i>History</i>	..	Dr. R. C. Mujumdar, M.A., Ph.D.
<i>Political Science</i>	..	Shri P. J. Jagirdar, M.A.
<i>Economics</i>	..	Shri B. H. Munje, M.A.

<i>Sanskrit, Pali and Prakrit</i>	..	Shri M. M. V. V. Mirashi, M.A.
<i>Arabic and Persian</i>	..	Dr. S. R. Rafiuddin, M.A., Ph.D.
<i>European Languages</i>	..	Dr. D. G. Londhey, M.A., Ph.D.
<i>Hindi</i>	..	Shri V. P. Shrivastava, M.A.
<i>Marathi</i>	..	Dr. V. B. Kolte, M.A., Ph.D., LL.B.
<i>Urdu</i>	..	Dr. S. Rafiuddin, M.A., Ph.D.
<i>Other Indian Languages</i>	..	Shri E. Eswaran, M.A.
<i>Music</i>	..	Shri L. S. Nandanpawar, B.Sc. (Hons.)
<i>Geography</i>	..	Shri P. K. Bidwai, M.A.
<i>Home Science</i>	..	Dr. Y. B. Mangrulkar, M.B.B.S., D.P.H., D.T.M.
<i>Art</i>	..	Shri V. B. Dehadrai, G.D., Arts.
<i>Mathematics</i>	..	Dr. N. G. Shabde, D.Sc.
<i>Public Administration and Local Self-Government</i>	..	Shri V. S. Murthy, M.A.
<i>Journalism</i>	..	Prof. William A. Dudde.
<i>Sociology</i>	..	Dr. R. W. Taylor.
<i>Psychology</i>	..	Shri V. W. Bapat, M.A.
<i>Statistics</i>	..	Dr. S. S. Shrikhande, M.Sc., Ph.D.
<i>Ancient Indian History & Culture</i>	..	Dr. M. B. Niyogi, LL.D.
<i>Library Science</i>	..	Shri Y. M. Muley, M.A., F.L.A.

(Included in the Faculty of Science)

<i>Chemistry</i>	..	Dr. G. V. Asolkar, M.Sc., Ph.D., D.Sc. (Lond.)
<i>Physics</i>	..	Dr. S. W. Chinchalkar, D.Sc.
<i>Mathematics</i>	..	Dr. N. G. Shabde, D.Sc.
<i>Zoology</i>	..	Dr. S. M. H. Khatib, M.Sc., Ph.D.
<i>Botany</i>	..	Dr. L. B. Kajale, D.Sc.
<i>Geology</i>	..	Shri K. Sripada Rao, M.Sc., F.G.S., F.A.Sc., F.N.I.
<i>Bio-Chemistry</i>	..	Dr. M. C. Nath, D.Sc., F.N.I., F.R.I.C.
<i>Statistics</i>	..	Dr. S. S. Shrikhande, M.Sc., Ph.D.

(Included in the Faculty of Law)

<i>Law</i>	..	Shri P. P. Deo, M.A., LL.B.
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(Included in the Faculty of Education)

<i>Education</i>	..	Shri S. N. Tamhane, M.A., M.Ed.
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(Included in the Faculty of Agriculture)

<i>Agriculture</i>	..	Dr. D. G. Dakshindas, B.Sc. (Agr.), Ph.D., I.A.R.I.
<i>Botany and Plant Pathology</i>	..	Dr. R. P. Asthana, M.Sc., Ph.D. (Lond.), F.L.S., F.R.M.S.
<i>Chemistry</i>	..	Shri R. C. Shrivastava, B.Sc., B.Sc. (Tech.) (Manchester), Dipl. R.T.C. (Glasgow).

(Included in the Faculty of Medicine)

<i>Medicine</i>	..	Dr. P. M. Bhandarkar, M.D., M.S.
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(Included in the Faculty of Commerce)

<i>Accounts and Statistics</i>	..	Shri M. R. Tokhi, M.A., B.Com., LL.B.
<i>Banking and Applied Economics</i>	..	Dr. M. M. Shah, M.A., Ph.D.
<i>Commerce and Business Economics</i>	..	Shri P. J. Patwardhan, M.Com.
<i>Languages (including both English and Indian Languages.)</i>	..	Shri S. N. Agarwal, M.A., F.R. Econ. S. (London), M.P.

(Included in the Faculty of Engineering and Technology)

<i>Civil Engineering</i>	..	Shri S. T. Khare, B.E. (Civil), M.E. (PH.), A.M.I.E.
<i>Mechanical Engineering</i>	..	Shri K. N. Tilloo, B.Sc. (Mech. & Elec. Eng.), A.M.I.E.
<i>Electrical Engineering</i>	..	Shri D. G. Tamaskar, B.Sc. (Elec. and Mech.)
<i>Architecture</i>	..	Shri V. R. Rajadhyax, Dip. in Arch., A.I.I.A.
<i>Chemical Technology</i>	..	Dr. P. S. Mene, B.Sc. (Hons.), Ph. D. (Chem.), D.I.C., F.G.M.S., M.I.I.E.
<i>Chemical Engineering</i>	..	Dr. P. S. Mene, B.Sc. (Hons.), Ph. D. (Chem.), D.I.C., F.G.M.S., M.I.I.E.
<i>Oil Technology</i>	..	Dr. T. N. Mehta, B.A. (Hons.) B.Sc. (Hons.) Ph.D., D.I.C.
<i>General Engineering</i>	..	Shri V. V. Sardesai, B.E. (Mech.), B.E. (Elect.), A.M.I.E.
<i>Pharmacy</i>	..	Dr. A. S. Paranjpe, M.D., C.H.B., D.T.M. & H.

Colleges Admitted to the Privileges of the University.

NAME OF COLLEGE	NAME OF PRINCIPAL
(I) <i>In Nagpur</i>	
Nagpur Mahavidyalaya	.. Dr. V. B. Kolte, M.A., Ph.D., LL.B.
Hislop College	.. Dr. D. G. Moses, M.A., Ph.D. (Columbia).
College of Science	.. Dr. L. B. Kajale, D.Sc. (London) (in-charge.)
College of Agriculture	.. Dr. R. P. Asthana, M.Sc., Ph.D., D.I.C. (Lond.), F.A.Sc., F.B.S.
S. B. City College	. Shri S. L. Pandharipande, M.A.
Lady Amritbai Daga College for Women	.. Dr. Kumari M. A. Saldanha, M.A., M.Sc., Ph.D.
Govt. Engineering College and Polytechnic.	.. Shri K. N. Tiloo, B.Sc. (Elec. & Mech. Eng.) A.M.I.E.
Dhanwate National College	. Dr. G. Londhey, M.A., Ph.D. (Leipzig)
Govindram Seksaria College of Economics & Commerce	.. Shri M. R. Tokhi, M.A. B.Com., LL.B.
Medical College	.. Dr. P. M. Bhandarkar, M.S.
St. Francis De Sales College	.. Shri M. J. Raja, M.A.
(II) <i>In Amravati</i>	
Vidarbha Mahavidyalaya	.. Dr. N. G. Shabde, D Sc.
Shri Shivaji College	.. Shri V. Subba Rao, M.A.
Govt. Post-Graduate Basic Training College	.. Shri M. A. Bambawale, B.Sc. (Hons.)
Govt. Polytechnic	.. Shri V. R. Dwarakanath, B.Sc., B.E.
Govt. Dip. T. Institute for Men	.. M. A. Bambawale, B.Sc. (Hons.)
Govt. Dip. T. Institute for Women	.. Shrimati N. Sathe, M.A., B.T.
(III) <i>In Akola</i>	
Sitabai Arts College	.. Shri N. R. Kelkar, M.A., B.T.
Govt. B. T. College	.. Shri R. H. Munje, M.Sc., M.R.S.T.
College of Agriculture	.. Shri R. C. Shrivastava, M.Sc. (Tech.) A.M.C.T., Dip. R.T.C.

NAME OF COLLEGE	NAME OF PRINCIPAL
<i>At other places</i>	
Govindram Seksaria College of Commerce, Wardha	.. Dr. M. M. Shah, M.A., Ph.D.
Rajasthan Aryan College, Washim	.. Shri V. P. Mohogaonkar, M.A., LL.B.
Govindram Seksaria College of Science & Arts, Khamgaon	.. Shri K. M. Munshi, M.Sc.
Amolakchand Mahavidyalaya, Yeotmal	.. Shri K. N. Vaidya, M.A.
Arts College, Buldana	.. Shri R. N. Kharche, M.A.

Constitution of the University

The Court is the supreme governing body and has general powers to revise the acts of the Executive and Academic Councils. The Court makes all the Statutes on the recommendation of the Executive Council and elects the Vice-Chancellor. The Treasurer is elected by the Court from among persons recommended by the Executive Council.

The Executive Council is the chief executive body and exercises control over the funds of the University, administers and applies them to purposes permissible under the Act. Subject to certain limitations, it makes the ordinances and after report by a Special Examination Committee publishes the examination results.

The Academic Council is the chief academic body. It constitutes Faculties and Departments of Study, prepares syllabuses and recommends ordinances embodying the condition of admission to examinations and degrees of the University.

At present there are the following Faculties: Arts, Science, Law, Education, Agriculture, Medicine, Commerce, (recently constituted.)

The Faculties constitute Boards of Studies for subjects included within their scope. These prepare the Courses of Study.

The University has also a Statutory Finance Committee which has generally the power to examine receipts and expenditure, to allocate funds and to sanction expenditure. Among other committees of the University are the Law College Committee, the Training College Committee, the Library Committee, the Students, Information Bureau, the Examination Recognition Committee, the Laxminarayan Technological Institute Committee and the Sports Committee. The University teachers are appointed by Committees of Selection constituted as follows:—(1) The Vice-Chancellor (Ex-officio Chairman), (2) The Head of the Department of Studies in the subject, (3) two experts appointed by the Academic Council, one person not being an officer or a teacher in the University or in a college, appointed by the Executive Council on the ground of his special knowledge of the subject or subjects with which the teachers are concerned and one member nominated by the Chancellor.

*Number of students in the University under the different
Faculties during the Session 1956-57*

Arts	..	5574
Science	..	4728
Law (Previous and Final)	..	762
Education	..	554
Agriculture Under-Graduates	..	488
Medicine	..	690
Commerce	..	1472
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Total	..	14268
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Number of successful students in the different Examinations of 1957

I. Examinations of March-April 1957.

EXAMINATION.	NO. APPEARED	NO. PASSED
1. M.A.	358	320
2. M.A. (Part I)	787	532
3. M.Sc.	76	65
4. M.Sc. (Part I)	138	100
5. B.A. (Pass)	1586	746
6. B.Sc. (Pass)	488	145
7. Intermediate (Arts)	2003	834
8. Intermediate (Science)	1561	553
9. LL.M.	4	nil
10. LL.B. (Final)	299	138
11. LL.B. (Previous)	327	119
12. B.T. (General)	246	243
13. B. T. (Basic)	20	20
14. Dip. T.	127	126
15. B.Sc. (Agr.)	111	102
16. Intermediate in Science (Agr.)	164	111
17. B.Sc. (Tech.)	9	8
18. First B. Tech.	47	28
19. Final B. Tech. (Part I)	15	10
20. Final B. Tech. (Part II)	4	4
21. First B.E.	66	31
22. Diploma in Engineering (First)	409	177
23. Diploma in Engineering (Final)	159	70
24. Intermediate in Architecture	43	4

EXAMINATION.	NO. APPEARED	NO. PASSED.
25. Diploma in Architecture (Final)	33	17
26. Diploma in Art (First)	14	10
27. Diploma in Arts (Final)	15	10
28. Oriental Learning (Junior)	24	17
29. Oriental Learning (Senior)	10	10
30. Oriental Learning (Higher)	7	7
31. First M.B.B.S.	56	45
32. Second M.B.B.S.	115	73
33. Final M.B.B.S. (Part I)	11	8
34. Final M.B.B.S. (Part II)	102	56
35. Diploma in Local Self Government	15	14
36. M.Com.	37	23
37. M.Com. (Part I)	62	42
38. B.Com.	252	125
39. Intermediate in Commerce	539	246
40. M.Ed. (Part I)	6	4
41. Diploma in Journalism	11	8
42. Certificate in Journalism	nil	nil
43. Diploma in Library Science	47	11
44. D.O.	2	2
45. M.Sc. (Part II)	5	5
46. M.D. (Part I)	5	nil
47. M.D. (Part II)	4	1
48. M.S. (Part I)	7	2
49. M.S. (Part II)	3	2
50. M.O. (Part I)	2	nil
51. M.O. (Part II)	4	nil
52. M.Sc. Medium (Part I)	6	6

II. *Supplementary Examinations of 1956.*

1. Intermediate (Arts.)	608	312
2. Intermediate (Science)	166	55
3. I.Sc. (Agr.)	40	8
4. Intermediate in Commerce	194	96
5. B.A. (Pass)	532	230
6. B.Sc. (Pass)	113	40
7. B.Sc. (Agr.)	10	7
8. B.Com.	70	41

EXAMINATION.	No. APPEARED	No. PASSED
9. Diploma in Engineering (First)	131	56
10. Diploma in Engineering (Final)	35	14
11. Previous LL.B.	136	90
12. Final LL.B.	128	58
13. First M.B.B.S.	121	72
14. Second M.B.B.S.	52	32
15. Final M.B.B.S. (Part I)	38	25
16. Final M.B.B.S. (Part II)	69	30
17. M.Sc. (Medicine) (Part II)	2	1
18. M.D. (Part I)	4	2
19. M.S. (Part I)	3	1
20. M.S. (Part II)	2	nil
21. M.O. (Part I)	1	nil
22. Final Diploma in Architecture	10	4
23. First B.Tech.	22	7
24. Final B.Tech. (Part II)	2	2
25. B.Sc. Tech.	23	17

ENDOWMENTS, SCHOLARSHIPS AND MEDALS.

The following are the important endowments:—

(1) Rao Bahadur Bapu Rao Dada Kinkhede Lectureship:—A lecturer on an honorarium of Rs. 1,000/- is appointed every alternative year to deliver a course of not less than three lectures

(2) Rao Bahadur Shridhar Ganesh Paranjape Memorial Lecture-ship:—A lecturer on an honorarium of Rs. 200/- is appointed every year or every alternative year as the Executive Council may determine to deliver a course of not less than three lectures in Marathi.

(3) The Morris Memorial Fellowship Fund:—A fellowship of the value of Rs. 150/- per mensem awarded for post-graduate study or research in Arts or Science to be prosecuted in a college in Madhya Pradesh and a scholarship of value of Rs. 50/ per mensem awarded for study for the M.A., or M.Sc. Degree of Nagpur University.

(4) The Shirole Scholarship for Arts Fund:—Two scholarships of the value of Rs. 8/- and Rs. 10/- per mensem termed as Junior and Senior Scholarships for Arts respectively awarded to two students standing highest at the High School Certificate of the M. P. Secondary Education Board and Intermediate (Arts and Science) Examinations, of Nagpur University respectively, every year.

(5) The Hai-Hai Kshatriya Education Fund:—One monthly scholarship of the value of Rs. 12/- to the student who stands first from among those successful candidates of the Hai-Hai Kshatriya com-

munity at the High School Certificate Examination of the Board of Secondary Education, Madhya Pradesh, of the year and who joins the course for the Intermediate (Arts or Science) Examination in a College in Nagpur University.

(6) The Mahadeo Hari Wathodkar Memorial Lectureship:—A lecturer appointed every year or every alternative year for such term and on such monthly salary as the Executive Council may determine, to deliver a course of lectures on any of the following subjects, viz—

- (1) Indian Archaeology,
- (2) Social Anthropology,
- (3) Comparative History,
- (4) Political and Economic Geography,
- (5) Political Science.

(7) Thakur Charitable Endowment:—(i) Four scholarships of the monthly value of Rs. 20/- each awarded to candidates selected from among students who have passed the High School Certificate Examination of the Madhya Pradesh Secondary Education Board and have joined a college in Nagpur University for prosecution of the Intermediate Science Course and (ii) one Fellowship of the monthly value of Rs. 150/- awarded to the candidate selected from among persons who have passed the M.Sc., B.Sc., (Hons.), or B.Sc. (Agr.) Examination of Nagpur University for prosecution of research in Science.

(8) K. S. Thakur Sada Parva Maintenance Fund:—Income applied to the maintenance, repairs and improvement of the "Sada Parva" building in Dhantoli, Nagpur, donated by Shrimati Janki Bai Thakur to the University for use as a Home for Women students of the University.

(9) Dr. E. Raghavendra Rao Memorial Professorship Endowment Fund:—Income utilised mainly for the salary of a University Professor appointed to the Dr. E. Raghavendra Rao Professorship for Political Science.

Besides these, a large number of Scholarships and Medals are awarded for proficiency at various examinations and in particular subjects, as under:—

(1) R.B.B.B. Gupta Gold Medal, (2) Radha Bai Paonaskar Scholarship and Gold Medals, (3) Ramakrishna Govind Mote Scholarship, (4) Waman Raghunath Joshi Prize, (5) K.B.H.M. Malak Gold Medals, (6) Daji Hari Wadegaonkar Gold Medal, (7) Jubbulpore Horticultural Show Prize, (8) Sushila Vishnupant Jakatdar Elocution Prize, (9) Balvant Rao Mahajan Prize, (10) Saraswati Bai Kolte Gold Medal, (11) University Post-Graduate Research Scholarship, (12) Korea Durbar Gold Medals, (13) Dewan Bahadur Ramakrishna Rao Pandit Silver Medal, (14) University World Politics Essay Gold Medal, (15) Sir Arthur Blennerhassett Memorial Silver Medals, (16) N. K. Behere Gold

Medal, (17) Ramanujam Mathematics Gold Medal, (18) V. R. Lakhkar Silver Medal, (19) Vice-Chancellor's Gold Medal, (20) Kesheo Khande-rao Wadegaonkar Silver Medal, (21) N. K. Behere Depressed Classes Prizes, (22) Shrimati Jayanti Bai Kolte Silver Medal, (23) N. K. Behere Inter-Communal Understanding Prizes, (24) Radha Bai Govind Oka Scholarship, (25) Gopalrao Ganesh Chate Gold Medal, (26) Chandra-bhaga Bai Chate Gold Medal, (27) Prakya Ganpatrao Gold Medal, (28) R. B. Sitaram Ramchandra Pandit Silver Medal, (29) Krishna Rao Golwalker Prize, (30) Hari Pandit Prize, (31) Chakradeo Memorial Gold Medal, (32) Madhav Rao Gangadhar Rao Chitnavis Memorial Fund, (33) Madhav Rao Chandorkar Memorial Gold Medal, (34) Ram-chandra Krishna Chandorkar Memorial Gold Medal, (35) Robertson Gold Medal, (36) Narayan Mukund Paonasker Prize, (37) Shivaji Narayan Makode Gold Medal, (38) Soubhagyavati Parbati Bai Makode Gold Medal, (39) Kamala Narayan Behere Literary Prize, (40) Vasant Krishnarao Khandekar Scholarship and Medal, (41) K. S. Behere Silver Medal for Teachers, (42) V. S. Tamma Silver Medal, (43) Raghunath Govind Khandekar Silver Medal, (44) Shreemati Parbati Bai Kashinath Dixit Scholarship, (45) Raghunath Harihar Pingley Memorial Gold Medal, (46) Nago Rao Narayan Rao Wazalwar Gold Medal, (47) Gopala Sharana Chaturvedi Gold Medal, (48) R. B. Dr. K. P. Sen Gupta Memorial Gold Medal, (49) D. B. Seth Gopaldas Bulakidas Mohta Gold Medal, (50) Dr. Sir Bipin Krishna Bose Memorial Gold Medal, (51) Arun Memorial Prize, (52) Niyogi and Puranik Diamond Jubilee (1946) Scholarship, (53) W. R. Puranik Gold Medal, (54) Govindram Seksaria College of Commerce (Wardha) Gold Medal, (55) Second Ramkrishna Govind Mote Scholarship, (56) The Indian Historical Records Commis-sion and Indian History Congress Commemoration Prize, (57) Univer-sity Research Studentship, (58) R. B. Jatashankar P. Trivedi, Memo-rial Gold Medal.

General Regulations for acceptance of Endowments by the Univer-sity among other conditions prescribed :—

	Rs.
(1) for a gold medal not less than ..	5,000
(2) for a Fellowship not less than ..	20,000
(3) for a Scholarship for under-graduate courses not less than ..	10,000
(4) for a Scholarship for post-graduate courses not less than ..	15,000
(5) for a prize which will ordinarily be in the form of books not less than ..	2,500

LIBRARY.

Libraries:—Each College maintains its own library which is fairly sufficient for its needs. The University library is housed in a separate building which is situated on the north Ambazari Road. The Library

at present contains 66,085 volumes. The manuscripts section was started in April 1945 and the University possesses more than 5,000 manuscripts acquired through purchase and gift. Arrangement has also been made for their being examined and catalogued by a scholar specially appointed for the purpose. In addition, there is a well-stocked Law Library for the University College of Law. It is up-to-date and has got a fairly complete set of Law Reports, Indian and English.

LABORATORIES.

The Laboratories of the connected institutions are fairly well fitted up for teaching Science subjects upto the standards for which they teach.

PROVISION FOR RESEARCH.

At present, the University awards one Post-graduate scholarship in Science for research from an Endowment Fund, three Fellowships for research in Bio-Chemistry, three Fellowships and six Scholarships for research in Technology from the Laxminarayan Bequest Fund. With effect from the financial year 1951-52, the University has instituted two Research Studentships—one in the Faculty of Science and one in the Faculty of Arts—each tenable for a period of two academic years. Besides the above, the Government of India have allotted the following Research Training Scholarships to the University :—(Rs. 200/- P.M.) Four Senior Scholarships—one each in Bio-Chemistry, Geology, Chemistry, and Botany, Three Junior Scholarships one each in Geology, Chemistry and Botany. The Bio-Chemistry Department of the University is a Research and teaching Department carrying on investigations on the new Anti-diabetic Principle (Amellin) as well as other general subjects such as Vitamins, Hormones, Enzymes, etc. The University Department of Ayurveda is purely a Research department carrying on research work on *Mercury*.

N. C. C. TRAINING

The University Officers Training Corps was abolished on 15th July, 1948 and has been replaced by National Cadet Corps on the same date. The strength of the Corps in the University for the academic year 1956-57 is given below :—

N. C. C. Boys' Troops :

		Teacher Officers.		Cadets.
Nagpur	..	20	..	939
Amravati	..	14	..	568
Akola	..	3	..	216
Khamgaon	..	3	..	154
Wardha	..	3	..	86
		<hr/>		<hr/>
Total	..	43	.. ..	1,963
		<hr/>		<hr/>

N. C. C. Girls' Troops

		<i>Teacher Officers</i>		<i>Cadets.</i>
Nagpur	..	3	..	120
Amravati	..	2	..	86
Akola	..	1	..	17
		<hr/>		<hr/>
Total	..	6	..	223
		<hr/>		<hr/>

N. C. C. Signal Section

		<i>Officers</i>		<i>Cadets.</i>
Nagpur	..	2	..	60
Amravati	..	2	..	44
		<hr/>		<hr/>
Total	..	4	..	104
		<hr/>		<hr/>

N. C. C. Air Squadron

		<i>Officers</i>		<i>Cadets.</i>
Nagpur	..	2	..	132

N. C. C. Medical Coy.

		<i>Officers</i>		<i>Cadets.</i>
Nagpur	..	1	..	120

N. C. C. Naval

		<i>Officers</i>		<i>Cadets.</i>
Nagpur	..	2	..	47

N. C. C. Engineer Platoon

		<i>Officers</i>		<i>Cadets.</i>
Nagpur	..	2	..	58

A building for accommodating the office and stores of the Corps was constructed by the University in August, 1934.

ASSOCIATIONS IN THE UNIVERSITY

The connected colleges have their own debating and literary societies. Some of these are inter-collegiate, e.g., Nagpur Philosophical Society, Historical Society, Economics Society, etc. Besides these, there are the following, viz. (i) A University Union Society, (ii) A University Historical Research Society and (iii) Nagpur University Ramayan Mandal.

RESIDENCE AND COST OF LIVING

It is difficult to make a general statement in the matter. The cost of boarding varies with the Hostel.

The total number of boarders in the University Hostels is 231 in the year 1956-57.

The number of approved hostels and number of boarders are given below :

	No. of Hostels	No. of boarders
Hostels attached to the affiliated Colleges	.. 24 for boys	1806
	.. 5 for girls	333
Hostels attached to the Constituent Colleges	.. 2 for boys	77
Recognised Hostels	.. 1 for boys	124

BUDGET

The total income (exclusive of Debt Heads) for the year 1956-57 was Rs. 20,39,620-3-0. As against this, there was an expenditure (exclusive of Debt Heads) of Rs. 18,01,004-10-1.

During the year 1956-57, the income (exclusive of Debt Heads) of the Nagpur University consisted of the following items :—

	Rs.	as.	ps.
1. Grants from State Government, Central Government and University Grants Commission	.. 10,12,384	13	0
2. Tuition and Examination fees	.. 9,49,084	15	0
3. Other income	.. 78,150	7	0
Total	.. 20,39,620	3	0

The account of the Trust Funds, under the administration of the University are maintained separately by Postal Savings Account for each of the Trust Funds, the corpus of each Trust Fund vesting in the Treasurer Charitable Endowments.

PROVIDENT FUND

Every whole-time officer, teacher, or other servants of the University other than one whose services have been lent to the University by Government, permanently appointed to a substantive appointment has, as a condition of his service, to become a depositor in the University Provident Fund.

Subscription to the fund is 8 per cent on the salaries of the depositors, deducted monthly from their salaries. Every month, the University makes, in the case of each subscriber, a contribution at the rate of 12 per cent. In the case of employees entering the service after 9-12-1938 the University makes a contribution at the rate of 8 per cent, if the salary is less than Rs. 200 and at 6½ per cent, for others.

NON-CONTRIBUTORY PROVIDENT FUND

Employees holding temporary posts in a College Department maintained by the University become eligible for subscription to the Non-Contributory Provident Fund from such date as may be fixed by the Executive Council. Subscription to this Fund is 8 per cent on monthly salary and half-yearly interest is added. Advances for illness may be granted from this fund to the extent of one-fourth of total deposit. On confirmation of such an employee without break of services the University contributes at the rate of 8 per cent for those drawing less than Rs. 200 p.m. and $6\frac{1}{4}$ per cent in the case of those drawing more than Rs. 200 from the date of appointment.

PROVIDENT FUND ADVANCE FOR INSURANCE PREMIUM

Non-refundable advances from the Provident Fund Deposit, of a University servant are paid on the same terms as prescribed under the Government Provident Fund Rules, subject to such variations as are approved by the Vice-Chancellor.

No subscriber is entitled to receive any contribution to his provident fund from the funds of the University if his services are dispensed with for misconduct or if he has been in the service for less than 3 years or resigns his appointment without permission of University.

Compound interest reckoned half-yearly at 3 per cent is allowed at present on the amount standing to the credit of every depositor on the 30th September and 31st March respectively in each year.

WOMEN'S EDUCATION.

The Lady Amritbai Daga College for Women, Nagpur, and Dip. T. Institute for Women, Amravati are the only institutions admitted to the privileges of the University exclusively for women. There are other colleges also where co-education is provided. The University has made a Statute, under which the Executive Council grants permission to women who have not pursued a course of studies in the University or a college to appear at the University examinations, in the faculties of Arts, Science and Law.

At the University examinations held in 1956 (Suppl.) and 1957 the number of successful women candidates was as follows:—

Supplementary Examinations of September-October, 1956.

Intermediate Arts	..	83
Intermediate Science	..	2
Intermediate Commerce	..	nil
B.A. (Pass)	..	49
B.Sc. (Pass)	..	1
Previous LL.B.	..	3

Final LL.B.	..	2
First M.B.B.S.	..	15
Final M.B.B.S. (Part I)	..	5
Final M.B.B.S. (Part II)	..	2

Examinations of March-April, 1957.

M.A.	..	66
M.Sc.	..	3
M.A. (Part I)	..	52
M.Sc. (Part I)	..	7
I.Com.	..	3
B.Com.	..	2
Previous LL.B.	..	—
Final LL.B.	..	3
B.Sc. (Agr.)	..	1
B.A. (Pass)	..	215
B.Sc. (Pass)	..	11
B.T. (General)	..	82
B.T. (Basic)	..	5
Dip. T.	..	64
First M.B.B.S.	..	2
Final M.B.B.S. (Part I)	..	10
Final M.B.B.S. (Part II)	..	10
Intermediate Arts	..	363
Intermediate Science	..	57
Intermediate Commerce	..	1
First Diploma in Art	..	2
Diploma in Journalism	..	5
Dip. in Engineering	..	2
Dip. in Library Science	..	2
M.Ed. (Part I)	..	3
Oriental Learning—Junior	..	4

A number of prizes, medals and scholarships are reserved exclusively for women.

STUDENTS' INFORMATION BUREAU AND ITS ACTIVITIES

The Students' Information Bureau makes available to the students of the University information regarding foreign Universities and helps them to secure admission at Universities in U.K. and U.S.A. The Bureau has a useful reference Library consisting of up-to-date Calen-

dars, Catalogues and other publications relating to the various Universities and Technical and Research Institutions in the U.K. and U.S.A.

PROVISION FOR SAFEGUARDING HEALTH, MEDICAL INSPECTORS, DISCIPLINE, ETC.

An important step towards the promotion of the Physical Welfare of its students was taken by the University, when on the State Government agreeing to contribute half the cost of his salary, the University appointed a whole-time officer, with effect from 7th August, 1935, for the organisation and supervision of Physical education in the University.

Compulsory, Physical Education was introduced in this University stage by stage. As a first step Physical Education was made compulsory for the first year college students in the year 1936; after two years it was made compulsory for second year students. Then in the year 1944 it was made compulsory for all the under-graduate students except the members of University Officers Training Corps. In the beginning, Physical Training Classes were conducted on alternate days for each student, but since October, 1944, Physical Training has been made compulsory for each under-graduate student every morning. Physical Training has also been made compulsory for Women under-graduate students from the session 1951-52 and Physical Training Instructresses have been appointed by the colleges for the purpose.

Every year a medical inspection of the under-graduate students is conducted in Colleges. The students and their guardians are informed of the defects of the students for necessary action.

Lectures on Physical Education and allied subjects are arranged by the colleges with a view to creating more interest in the subject on the part of the students and to enable them to appreciate the importance of physical education.

The Physical training classes of every college are inspected by the Officer-in-Charge of Physical Education periodically and necessary instructions are imparted by him.

From the year 1945 arrangements have been made to conduct Physical Training classes in various centres in different parts of the City where college students, irrespective of the colleges to which they belong, assemble and have physical training. One of the college instructors is held responsible for physical training of all the students at the centre assigned to him. This arrangement has eliminated inconvenience felt by the students in going long distance and wasting time.

Short courses for Physical Training Instructors and student-instructors are conducted every year for two weeks at Nagpur by the Officer-in-Charge of Physical Education

Students are refused admission to the University Examinations if there is considerable deficiency in the attendance at the Physical training classes. A student must attend at least 80 per cent of the physical training classes.

The University holds annually Sports Tournaments for Cricket, Hockey, Football, Athletics, Badminton, Tennis, Hutu-tu, Kho-kho and Wrestling and pays Travelling and Halting allowances to out-stationed college teams as per rules and regulations of the University Sports.

Tournaments are framed by the Board of Physical Welfare, Nagpur University, which looks after all these activities. The University also participates in the various items of the sports tournaments organised by the Inter-University Board of India. The Nagpur University had organized South Zone Inter-University Football Tournament at Nagpur this year, and Nagpur University team had won the South Zone Final.

Almost all the colleges connected with the University have good playing fields attached to them and ample opportunities are given to the students to take part in outdoor games.

As the University has at present no Central Play-ground of its own, the State Government has been requested to permit the University to develop the Play-ground of the College of Agriculture into a Central University Play-ground for Hockey, Football, Cricket and Athletics. The matter is at present under consideration of the Government.

COURSES OF STUDY, EXAMINATIONS AND DEGREES

The University confers the degrees of B.Com., M.Com., and Ph.D. in Commerce; B.A., M.A., Ph.D., and D.Litt., in Arts; B.Sc., B.Sc. (Tech.), B.Tech., M.Sc., M.Sc., (Tech.), Ph.D., and D.Sc., in Science; LL.B., LL.M., and LL.D., in Law; B.T., M.Ed., and Ph.D., in Education; and B.Sc. (Agr.), M.Sc. (Agr.) and Ph.D. in Agriculture; M.B.B.S., D.O., M.Sc., M.D., M.S., M.O., and Ph.D. in Medicines; Diplomas in Teaching, Engineering, Art, Architecture, Local Self-Government, Library Science, and Journalism are also awarded. Examinations in Oriental Learning are being held from the year 1938.

ADMISSION TO THE UNIVERSITY

Admission to the University is confined to students who have passed the High School Certificate Examination held under the C. P. High School Education Act of 1922 or Board of Secondary Education, Vidarbha or any other recognised equivalent examination.

COURSES OF STUDY AND EXAMINATIONS IN THE FACULTY OF ARTS

Admission to Examination:—For all examinations of the University, candidates must have prosecuted a regular course of studies in a college except as follows:—

- (a) Whole-time salaried teachers of recognised educational institutions in the State may, under certain conditions be admitted to the examinations in Arts and Science. A teacher of Commerce in a recognised High School may also be admitted, under certain conditions, to the I.Com. and B.Com. Examinations.
- (b) Women candidates who have not pursued a regular course of studies in a college or in the University may be admitted to examinations in Arts and Science and Law under certain conditions.
- (c) Candidates who have been admitted once to an examination, may be re-admitted to the same examination, without joining a college.
- (d) A B.A. of any recognised university residing in Bombay State may be admitted to the M.A. Examination provided the subjects taken by him for the M.A. examination is one of the subjects taken by him at or in which he subsequently passes his B.A. Examination and not less than three years, shall have elapsed since his graduation for the purpose of admission to the M.A. Examination and not less than two years shall have elapsed for the purpose of admission to M.A. Part I Examination. A similar rule is in force in respect of the B.Sc.'s for the purpose of admission to the M.Sc. Examination in Mathematics.
- (e) A whole-time salaried librarian or clerk of (a) the Nagpur University Library; (b) A Library of a College connected with the University; or (c) a Library in Madhya Pradesh recognized by the Academic Council, may be admitted, under certain conditions, to the Examinations in Arts and Science.

Intermediate Examination:—The course of study extends over two years subsequent to passing the High School Certificate Examination or any other recognised equivalent examination and candidates are required to study for the examination the following subjects divided in Groups as stated below :—

A. English.

B. One of the following languages, viz. :—Hindi, Marathi, Urdu, French or German.

C. Any two of the following subjects, viz. :—

(1) Mathematics.

(2) One of the following languages, viz. Sanskrit, Pali, and Prakrit, Arabic, Persian or Latin.

(3) History and Allied Geography.

(4) Logic (Deductive and Inductive).

(5) Economics.

(6) Geography.

and D. One other subject from among the subjects under Group C or one of the following subjects, viz. :—

(1) Civics and Public Administration in India.

(2) Music.

(3) Home Science (for Women only).

(4) Sociology.

and (5) Psychology.

Candidates who obtain 33 per cent in English, 30 per cent in other subjects and 33 per cent in the aggregate are qualified for a pass in the Third Class ; those obtaining less than 60 per cent but not less than 45 per cent for a pass in the Second Class ; and those obtaining 60 per cent or more in the aggregate, for a pass in the First Class.

Bachelor of Arts: Candidates who have passed the intermediate Examination of this or any other recognized equivalent examination of another University are eligible for admission to the course, which extends over two academic years.

Candidates are required to study for the examination the following subjects divided in Groups as stated below :—

A. Compulsory English.

B. Any two of the following subjects, viz. :—

(1) Sanskrit, Pali and Prakrit, Arabic, Persian or Latin.

(2) Pure Mathematics.

(3) History and Allied Geography.

(4) Economics.

(5) Philosophy.

(6) Political Science.

(7) Geography.

(8) Hindi, Marathi or Urdu.

and C. One other subject from among the subjects under Group B or one of the following subjects, viz.—

(1) English Literature.

(2) French or German.

(3) Applied Mathematics.

(4) Music.

(5) Home Science (for Women only).

(6) Sociology.

(7) Psychology.

and (8) Statistics.

Candidates who obtain 33 per cent in each subject are entitled to a pass in the Third Class. Those obtaining less than 60 per cent but not less than 45 per cent entitled for a pass in the Second Class, and those obtaining 60 per cent or more in the aggregate for a pass in the First Class..

Master of Arts :—The course extends over two academic years subsequent to the passing the B.A. or any other recognised equivalent examination. The M.A. Examination has been divided into two parts, viz.—Part I and Part II. A candidate may offer any one of the following subjects.—A language (English, Sanskrit, Pali and Prakrit, Arabic, Persian, Marathi, Hindi or Urdu), Philosophy, History, Pure Mathematics, Applied Mathematics, Economics, Political Science, Geography or Public Administration, Statistics, Sociology and Ancient Indian History and Culture.

The number of papers prescribed for each subject in the M.A. Examination is given below :—

Subject	Papers and Practical Prescribed in Part I	Aggregate marks in Part I	Papers, Viva Voce and Practical Prescribed in Part II	Aggregate marks in Part II	Aggregate of the marks in Part I & Part II
English	I, II, III & IV	400	(A) I, II, III & IV. 400 (B) Viva Voce 100	500	900
Philosophy	I, II, III & IV	400	(A) I, II, III & IV. 400 (B) Viva Voce 100	500	900
Public Administration	I, II, III & IV	400	(A) I, II, III & IV. 400 (B) Viva Voce 100	500	900
Sanskrit & Pali	I, II, III & IV	400	I, II, III & IV	400	800
Prakrit	I, II, III & IV	400	I, II, III & IV	400	800
Persian	I, II, III & IV	400	I, II, III & IV	400	800
Arabic	I, II, III & IV	400	I, II, III & IV	400	800
Marathi	I, II, III & IV	400	I, II, III & IV	400	800
Hindi	I, II, III & IV	400	I, II, III & IV	400	800
Urdu	I, II, III & IV	400	I, II, III & IV	400	800
History	I, II, III & IV	400	(A) I, II, III & IV 300 (B) Viva Voce (Paper II) 100	400	800

Subject	Papers and Practical Prescribed in Part I	Aggregate marks in Part I	Papers, Viva Voce and Practical Prescribed in Part II	Aggregate marks in Part II	Aggregate of the marks in Part I & Part II
Economics	I, II, III & IV	400	(A) I, II & III (B) Viva Voce (Paper IV)	300 } 100 }	400 } 800 }
Political Science	I, II, III & IV	400	(A) I, II & III (B) Viva Voce (Paper IV)	300 } 100 }	400 } 800 }
Geography	(A) I, II & III (B) Practical.	300 } 100 } 400 }	(A) I, II & III (B) Practical	300 } 100 }	400 } 800 }
Pure Mathematics	I, II, III & IV	400	I, II, III & IV	400	800
Applied Mathematics	I, II, III & IV	400	I, II, III & IV	400	800
Statistics	(A) I, II & III (B) Practical.	300 } 100 } 400 }	(A) I, II & III (B) Practical	300 } 100 }	400 } 800 }

NOTE :—The maximum marks for each paper, or *Viva Voce* or Practical Examination shall be 100.

In order to be successful in Part I or Part II of the Examination an examinee shall obtain (A) not less than 36% of the aggregate marks in that Part of the examination and (B) not less than 36% of the maximum marks assigned—(1) to the papers and (2) at the Practical examinations, if any, forming Part of the examination separately.

- | | |
|---------------|----------------------------------|
| I. Division | .. 60 per cent of the aggregate. |
| II. Division | .. 48 per cent of the aggregate. |
| III. Division | .. 36 per cent of the aggregate. |

In the results of the M.A. Part II Examination classification of division will be made according to the marks obtained in Part I and Part II Examinations taken together. No classification will be made in the result of M.A. Part I Examination.

Doctor of Philosophy:—Candidates who have obtained the degree of Master of Arts or Bachelor of Arts with Honours, or Master of Commerce of this University or a degree of any University recognised by

Nagpur University as equivalent to its degree of M.A., are eligible for the degree after prosecuting research for two years. Every candidate shall prepare his thesis under the guidance of a supervisor to be appointed by the Academic Council.

Under the revised system it has been made obligatory for research students to stay at Nagpur or at other places within the territorial jurisdiction of the University and work more closely under the immediate supervision of their supervisors. Research students will be required to meet and discuss with their supervisors the plans and progress of their research work at least once in a fortnight during each academic year.

Doctor of Letters:—Candidates who have been admitted not less than three years previously to the degree of Doctor of Philosophy of Nagpur University or to a degree recognised by the University as equivalent thereto, for not less than eight years previously to the degree of Master of Arts of the University or to a degree recognised by the University as its equivalent, are eligible to offer as candidates for the Degree of Doctor of Letters. Every candidate for the degree must submit one or more treatises being original contributions to the advancement of learning.

Diploma in Local Self-Government:—The Diploma course extends over one academic year and is open to—

(a) those who have passed the Intermediate Examination in Arts or other equivalent examination ;

or

(b) are employees of a Local Self-Government body in Madhya Pradesh and have passed the High School Certificate or other equivalent examination.

The subjects of study and examination are—

(1) Local Self-Government in Madhya Pradesh, (2) Local Finance and Accounts in Madhya Pradesh, (3) (a) Municipal Administration, Municipal Engineering and Town Planning (b) Hygiene and Public Health, (4) Comparative Local Government and (5) Practical Training Test. The *Viva Voce* shall be based on the theoretical knowledge and the practical experience which the students have gained.

In order to be successful at the examination, an examinee must obtain not less than thirty per cent marks in the test of practical training and not less than thirty-six per cent marks in the papers and test of practical training taken together. Successful examinees obtaining sixty per cent or more of the aggregate marks are placed in the first division, those obtaining less than sixty per cent, but not less than forty-eight per cent in the second division and all other successful examinees, in the third division.

Diploma and Certificate Course in Journalism:—The Diploma Course extends over one academic year and is open to those who hold a degree of Nagpur University or a degree of any University incorporated by law in India.

The examination shall consist of four parts, viz.—

Part I—Written examination in the following papers :

Paper I—

(a) Introduction to Journalism

and

(b) Newspaper Business Management and Advertising.

Paper II—

(a) News Reporting and Writing.

and

(b) Law of the Press.

Paper III—

(a) Editing

and

(b) Graphic Arts.

Paper IV—

(a) Magazine Article Writing

and

(b) Fundamentals of Good Writing.

Paper V—

(a) Current Affairs

and

(b) Radio Journalism

Part II :—A Practical Examination in

1. News Reporting and Writing.

2. Graphic Arts.

3. Editing

and

4. (a) Social Education Materials Writing.

(b) Newspaper Business Management and Advertising.

B.—Class Work.

Part III :—Internship in Journalism

Part IV :—Seminar in Journalistic Research.

Every candidate for the examination before he is admitted to the examination (i) shall have attained proficiency of not less than 25 words a minute in Typwriting to the satisfaction of the Principal of the College and (ii) shall be required to undergo a course of Internship for a period of not less than twelve weeks in journalistic practice work approved by the Head of the Department of Studies in Journalism. The journalistic practice work may be carried

out in establishments of approved newspapers of Indian Languages as well as those of English newspapers.

The marks for test in the course of Part III—Internship in Journalism and Part IV—Seminar in Journalistic Research shall be awarded by the teacher-in-charge of the subject.

In order to pass a candidate must obtain not less than forty per cent of the marks in the papers taken together in each of the three parts of the examination and not less than fifty per cent marks in class work.

Successful examinees obtaining sixty per cent or more of the aggregate marks shall be placed in the first division those obtaining less than sixty per cent but not less than fifty per cent of the aggregate marks, in the second division and all other successful examinees, in the third division.

The Certificate Course :—Also extends over one academic year and is open to those who passed the High School Certificate Examination of the Board of Secondary Education, Madhya Pradesh, or an examination recognised as equivalent thereto.

The syllabus for the examination shall be the same as that for the examination for the Diploma in Journalism, except that the candidates for the examination shall not be examined in Papers IV and V in Part I of the examination for the Diploma in Journalism.

The percentage of marks for pass and divisions is the same as is prescribed for the examination for the Diploma in Journalism.

In both the examinations there is a provision for appearing in one or more parts of the examinations in different years instead of in all the three parts of the examination in one and the same year. If any candidate fails to pass the examination in all the three parts, within a period of three years from the date of the examination in which he was eligible for the first time for admission in one or more parts, he shall not be admitted to the examination in any subsequent year, unless he takes the examination in all the three parts together.

Successful examinees who have not taken their examination in all parts in one and the same year shall be placed in the passed division.

Diploma in Library Science :—The Diploma Course extends over one academic year and is open to those, who (i) have been admitted to a degree of Nagpur University or a degree of any University incorporated by Law in India; or (ii) have passed the Intermediate Examination in Arts, Science, Commerce or Agriculture of Nagpur University or an equivalent examination recognised by Nagpur University as equivalent thereto, and put up two years' service in a Library recognised by this University for the purpose; or (iii) have passed the Matriculation Examination of any University or Board incorporated by

Law in India and put up five year's service in a Library recognised by Nagpur University for the purpose.

The examination shall consist of two Parts, viz.—

Part I—Theory consisting of 5 papers as follows:—

	Maximum Marks.	Minimum Pass Marks.
Paper I. Library Organisation	.. 100	175
Paper II. Library Administration	.. 100	
Paper III. Classification	.. 100	
Paper IV. Cataloguing	.. 100	
Paper V. Bibliography, Book Selection and Reference Service .	.. 100	
Total	.. 500	175
<i>Part II</i> —Two Practical Test and <i>Viva-Voce</i> .		
(I) Practical Test in Classification	.. 75	90
(II) Practical Test in Cataloguing	.. 75	
(III) Viva Voce	.. 50	
	200	
	700	280

In order to pass the Examination, an examinee must get out of the total marks obtainable, a minimum of 35 per cent marks in Part I and a minimum of 45 per cent marks in Part II and 40 per cent marks in the aggregate (Parts I and II together).

I. Division 60 per cent of the aggregate

II. Division .. 50 per cent of the aggregate

III. Division .. 40 per cent of the aggregate

Successful examinees obtaining 75 per cent or more marks in aggregate in Part I or Part II or both shall be declared to have passed with Distinction in the part or parts concerned.

EXAMINATIONS IN ORIENTAL LEARNING

The University holds Junior, Senior and Higher Diploma Examinations in Sanskrit, Pali or Prakrit, and Persian or Arabic. The media of examination and instruction are ; Sanskrit in the case of candidates offering Pali and Prakrit ; Persian in the case of candidates offering Persian and Urdu in the case of candidates offering Arabic.

Persons who have received instruction for two years from a teacher recognised for the purpose are eligible for admission to the Examination.

Besides, whole-time salaried teachers in recognised educational institutions and women are allowed to appear at the Junior Diploma Examination.

For the Senior Diploma Examination persons who have received instruction for two academic years from recognised teachers, teachers and women, who have passed the Junior Diploma Examination of this University or any other recognised equivalent examination are eligible. Graduates of Nagpur University or of other recognised Universities are also admitted.

For the Higher Diploma Examination persons who have received instruction for two academic years from recognised teachers and women who have passed the Senior Diploma Examination of this University or other equivalent examination may be admitted. Persons who have passed the M.A. Examination of Nagpur University or other equivalent examination may also be admitted.

Persons obtaining thirty-three per cent in the aggregate are placed in the third division. Those obtaining sixty per cent or more are placed in the first division, those obtaining less than sixty per cent but not less than forty-five per cent are placed in the second division.

The number of question papers for each examination is : Junior Diploma 3 ; Senior Diploma 4 ; and Higher Diploma 6.

EXAMINATIONS FOR THE DIPLOMA IN ART

First Examination for the Diploma in Art

The course of study extends over one year after passing the High School Certificate Examination or any other recognised equivalent examination. The subjects of study and examination are (1) Drawing, (Geometrical and Perspective) (2) Art (Design and Still life) and (3) Commercial Art (Show Card Press lay out).

Candidates who obtain the prescribed number of marks in each subject and forty per cent in the aggregate are eligible for a pass. Those obtaining sixty per cent or more marks are placed in the first division, those obtaining less than sixty per cent but not less than fifty per cent are placed in the second division and all other successful examinees in the third division.

Final Examination for the Diploma in Art

The course of study extends over two years after passing the First Examination for the Diploma in Art. Every candidate for the Final Examination for the Diploma in Art shall be examined in the following subjects :

(i) Fine Art (History of Art, Memory Drawing, Shading from cast, — Portrait Pointing, Figure Composition). (ii) Commercial Art (Book, Jacket, Poster, Press lay out) and (iii) Photograpny.

In order to pass, a candidate must obtain forty per cent of the aggregate marks besides the prescribed minimum for each subject. Successful examinees obtaining sixty per cent or more of the aggregate marks are placed in the first division, those obtaining less than sixty per cent but not less than fifty per cent shall be placed in the second division and all other successful examinees, in the third division.

SCIENCE

Intermediate Examination

The conditions of admission to the course are the same as those for the Intermediate Examination in Arts and a candidate is required to study for examination the following subjects:— (1) English (3 papers), (2) Composition in a Modern Indian Language or Supplementary English Composition (1 paper), (3) Physics (2 papers and practical examination), (4) Chemistry (2 papers and a practical examination), (5) Mathematics (3 papers) or Biology (2 papers and a practical examination).

Candidates who obtain 33 per cent of the marks in English, 30 per cent of the marks in other subjects and 33 per cent in the aggregate are eligible for a pass, those obtaining 60 per cent or more being placed in the First Division, those obtaining less than 60 per cent but not less than 45 per cent in the Second Division, and other successful candidates in the Third Division.

Bachelor of Science (Pass)

The course extends over two academic years subsequent to passing the Intermediate Examination of this University or any recognised equivalent examination of another University. The following are the subjects for study and examination: Compulsory English and one of the following groups, viz. — (1) Pure Mathematics, Physics and Chemistry, or (2) Chemistry, Botany and Zoology, or (3) Pure Mathematics, Applied Mathematics and Physics, or (4) Pure Mathematics, Applied Mathematics and Chemistry, or (5) Chemistry, Geology and Pure Mathematics, Physics, Botany or Zoology or (6) Statistics, Pure Mathematics and Physics, or Chemistry. There are two papers in Compulsory English, two papers and practical in Physics, Zoology, Botany, Geology and Statistics; three papers and practical in Chemistry and three papers in Mathematics.

It is also possible to offer Military Science as an option but no examination in the subject has been held in the past nor will any be held in the immediate future.

A candidate may offer "B" Certificate of the University Officers' Training Corps or "C" Certificate of the National Cadet Corps or "G-II" Certificate of the National Cadet Corps (Girls' Division) in lieu of Compulsory English.

The minimum marks for success at the examination are the same as those for B.A. Examination except that candidates must pass separately in the practical part of each laboratory subject.

Master of Science

The course of study extends over two years subsequent to passing the B.Sc. Examination of Nagpur University or an equivalent recognised examination of any other University. The M.Sc. Examination has been divided into two parts *viz.*—Part I and Part II. The following are the subjects for study and any one of them may be selected. — Mathematics, Physics, Chemistry, Zoology, Botany, Geology, Statistics, or Biochemistry.

The number of papers prescribed is as follows —

(1) Mathematics (Pure)—7, (2) Mathematics (Applied)—7, (3) Physics—5, (4) Chemistry—5, (5) Zoology—5, (6) Botany—5, (7) Geology—5, (8) Statistics—7 and (9) Bio-Chemistry—6.

The allocation of Papers and Practicals for Part I and Part II of M.Sc. examination in different subjects is given below :—

<i>Part I</i>		<i>Part II</i>	
Physics :			
(A) Papers I, II, III and IV	.. 400	(A) Papers I, II, III and IV	400
(B) Practical	.. 200	(B) Practical	200
Pure & Applied Mathematics :			
Papers I, II, III and IV	.. 400	Papers I, II, III and IV	400
Zoology :			
(A) Papers I, II and III	.. 300	(A) Papers I, II & III	300
(B) Practical	.. 200	(B) Practical	200
Botany :			
(A) Papers I, II and III	.. 300	(A) Papers I, II & III	300
(B) Practical	.. 200	(B) Practical	200
Bio-Chemistry :			
(A) Papers I, II and III	.. 300	(A) Papers I, II & III	300
(B) Practical	.. 200	(B) Practical	200
Geology :			
(A) Papers I, II and III	.. 300	(A) Papers I and II	200
(B) Practical	.. 200	(B) Dissertation	100
		(C) Practical	200
Chemistry :			
(A) 2 Papers	.. 200	(A) 3 Papers	300
(B) Practical	.. 200	(B) Practical	200
Statistics :			
(A) Papers I, II and III	.. 300	(A) Papers I, II & III	300
(B) Practical	.. 100	(B) Practical or thesis	100

In order to be successful in Part I or Part II of the examination an examinee shall obtain (a) not less than thirty-six per cent of the aggregate marks in that part of the examination and (b) not less than thirty-six per cent of the maximum marks assigned (i) to the papers and (ii) at the Practical Examination if any, forming part of the examination separately.

There shall be no classification of the examinees successful in Part I of the examination.

Examinees who are successful in Part II of the Examination and have obtained sixty per cent or more of the aggregate of the marks in Part I and Part II of the Examination taken together shall be placed in the first division; those obtaining less than sixty per cent but not less than forty-eight per cent of such marks shall be placed in the second division and all other successful examinees in the third division.

Doctor of Philosophy:—Candidates who have obtained the degree of Master of Science of this University or a degree of any University recognised by Nagpur University as equivalent to its degree of M.Sc., are eligible for this degree, after prosecuting research for at least two years. Every candidate shall prepare his thesis under the guidance of a Supervisor to be appointed by the Academic Council.

Under the revised system it has been made obligatory for research students to stay at Nagpur or at other places within the territorial jurisdiction of the University and work more closely under the immediate supervision of their supervisors. Research students will be required to meet and discuss with their supervisors the plans and progress of their research work at least once in a fortnight during each academic year.

Doctor of Science:—Candidates who have obtained the Master's degree in Arts of this University with Mathematics as a subject of their examination, or a Master's degree in Science are eligible to offer a thesis for the D.Sc. Degree provided three years have elapsed since the Master's Degree was taken. Every candidate must submit a thesis based on the result of research on a subject prescribed for the M.Sc. Examination and conducive to the advancement of Science in general.

Bachelor of Technology (B.Tech.):—The course extends over four academic years subsequent to the passing of the Intermediate examination in Science of this University or an examination recognised by Nagpur University as equivalent thereto with Physics, Chemistry and Mathematics among subjects at the examination.

There shall be the following three examinations for the degree of Bachelor of Technology, viz.—

- (1) The First B.Tech. Examination having a course for two academic years;

- (2) The Final B.Tech. Examination Part I—having a course for one academic year;
- (3) The Final B.Tech. Examination, Part II—having a course for one academic year.

The following are the subjects for B.Tech. Examination :—

(a) *First B.Tech. Examination—*

- (i) Chemistry, (ii) Mathematics and (iii) Engineering.

(b) *Final B. Tech. Examination, Part I—*

- (i) Engineering, (ii) Chemical Technology and (iii) Introductory Chemical Engineering.

(c) *Final B. Tech. Examination, Part II—*

- (i) Advanced Chemical Engineering and (ii) Oil Technology.

Candidates must obtain at least forty per cent of the maximum marks in each subject of the examination in theory and in Practicals and must obtain not less than forty-five per cent of the aggregate marks at the examination. Those obtaining sixty-five per cent or more marks are placed in the first division, those obtaining less than sixty-five per cent but not less than forty-five per cent in the second division.

M. Tech.:—Persons who have passed the examination for the B. Tech. degree of the Nagpur University or any other equivalent examination may offer themselves as candidates for the degree of Master of Technology. Every candidate must prepare a thesis under a Supervisor approved by the Academic Council.

The Intermediate Examination for the Diploma in Architecture.

The course is open to students who have passed the High School Certificate examination or any other recognised equivalent examination and extends over three academic years. Every candidate shall be examined in the following subjects, viz.—

- (1) Architectural Design, (2) Building Construction, (3) Structural Mechanics, (4) History of Architecture, (5) Materials and Specification and (6) Surveying.

An examinee must obtain in each subject the prescribed minimum marks and fifty per cent in the aggregate. Those obtaining seventy per cent or more of the aggregate marks shall be placed in the first Division and all other successful examinees in the second division.

EXAMINATION FOR THE DIPLOMA IN ENGINEERING

The First Examination for the Diploma in Engineering.

The course is open to students who have passed the High School Certificate Examination or any other recognised equivalent examination and extends over one academic year. Every candidate shall be examined in the following subjects, viz.—

(1) Engineering Drawing, (2) Mathematics, (3) Physics, (4) Chemistry, (5) Building Materials and Surveying, (6) General Mechanical, Electrical and Automobile Engineering and (7) Work Shop Practice.

Candidates must obtain the minimum marks, prescribed in each subject and forty per cent in the aggregate. Those obtaining sixty per cent or more of the aggregate marks are placed in the first division, those obtaining less than sixty per cent but not less than fifty per cent are placed in the second division and all other successful examinees are placed in the third division.

The Final Examination for the Diploma in Engineering.

The course of study extends over two academic years after passing the First Examination for the Diploma in Engineering of this University or for not less than one year after passing the Previous Subordinate Examination of the Osmania Engineering College, Hyderabad. Certain exemptions are granted to those who have prosecuted a course of study in part or whole for a corresponding examination of another University. Every candidate is examined in one of the following branches of Engineering viz.—Civil Engineering, Mechanical Engineering, Automobile Engineering, Electrical Engineering and Architecture. Subjects of examination in each branch of Engineering are :

(i) *Civil Engineering* :—

1. Strength of Materials, 2. Theory of Structures, 3. Hydraulics, 4. Surveying, 5. Civil Engineering, 6. Drawing, 7. Estimating and 8. Mathematics.

(ii) *Mechanical Engineering* :—

1. Strength of Materials, 2. Mechanics of Machines, 3. Engineering Chemistry, 4. Mechanical Engineering, 5. Electrical Technology, 6. Machine Drawing, 7. Mathematics, 8. Mechanical Laboratory Class Work, 9. (i) **Workshop Practice** and (ii) Viva Voce.

(iii) *Automobile Engineering* :—

1. Strength of Materials, 2. Mechanics of Machines, 3. Engineering Chemistry, 4. Automobile Engineering, 5. Electrical Equipment of Automobile, 6. Machine Drawing, 7. Mathematics, 8. Mechanical Laboratory Class Work, 9. (i) **Workshop Practice** and (ii) Viva Voce.

(iv) *Electrical Engineering* :—

1. Strength of Materials, 2. Mechanics of Machines, 3. Electrical Engineering, 4. Prime Movers, 5. Machine Drawing, 6. Mathematics, 7. Mechanical Laboratory Class Work, 8. (i) **Workshop Practice** and (ii) Viva Voce.

(v) *Architecture* :—

1. Architectural Design, 2. History of Architecture, 3. Building Construction, 4. Theoretical Construction and 5. Sanitation, Hygiene and Acoustics.

Candidates who obtain the prescribed minimum number of marks in each subject and forty per cent in the aggregate are eligible for a pass. Those obtaining sixty per cent or more marks are placed in the first division, those obtaining less than sixty per cent but not less than fifty per cent are placed in the second division and all other successful examinees in the third division.

BACHELOR OF ENGINEERING.

The course extended over three academic years subsequent to the passing of the Intermediate Examination in Science with Physics, Chemistry and Mathematics or its equivalent examination recognised by Nagpur University or having passed the final Examination for the Diploma in Engineering of Nagpur University or an examination recognised as equivalent thereto or having passed the Pre-University Examination of Delhi Polytechnic or of Saugor University.

There shall be the following three examinations for the degree of Bachelor of Engineering, viz.—

- (1) First Examination for the Degree of Bachelor of Engineering, having a course of one academic year,
- (2) Second Examination for the Degree of Bachelor of Engineering having a course of one academic year.
and
- (3) Final Examination for the Degree of Bachelor of Engineering having a course of one academic year;

The following are the subjects for B.E. Examination :—

(a) First B.E. Examination—Mathematics, Applied Science (i) Engineering Physics and (ii) Engineering Chemistry, Applied Mechanics, Heat Engines, Building Materials, Surveying, Electrical Engineering, Engineering Drawing and Workshop Practice.

(b) Second B.E. Examination—One of the following branches—

(1) Civil Engineering, (2) Mechanical Engineering and (3) Electrical Engineering and

(c) Final B.E. Examination—One of the following branches—

(1) Civil Engineering, (2) Mechanical Engineering and (3) Electrical Engineering.

Successful examinees obtaining 66 per cent or more of the total marks shall be declared to have passed with distinction, those obtaining less than 66 per cent but not less than 60 per cent shall be placed in the first division, those obtaining less than 60 per cent but not less than 50 per cent shall be placed in the Second division.

Bachelor of Pharmacy (B. Pharm.)

The course extends over three academic years subsequent to the passing of the Intermediate Examination in Science with Physics,

Chemistry and Biology of Nagpur University or its equivalent recognised examination.

There shall be the following *two* examinations for the Degree of Bachelor of Pharmacy, viz.—

(1) First Examination for the degree of Bachelor of Pharmacy, having a course of two academic years.

(2) Final Examination for the degree of Bachelor of Pharmacy, having a course of one academic year.

The following are the subjects for B. Pharm. Examination.

(a) *First B. Pharm. Examination :—*

(1) Pharmaceutical Economics and Forensic Pharmacy, (2) Pharmaceutical Chemistry, (3) Bio-chemistry and Physiology, (4) Pharmacy and (5) Pharmacognosy.

(b) *Final B. Pharm. Examination :—*

(1) Pharmaceutical Chemistry, (2) Pharmacology and Toxicology, (3) Pharmacy and (4) Pharmacognosy.

Successful examinees, at the examination shall be placed in two classes as stated below :—

(a) Examinees who obtain at least 45 per cent marks in the aggregate but less than 60 per cent marks shall be placed in the second division.

(b) Examinees who obtain 60 per cent or more marks in the aggregate shall be placed in the first division.

(c) Examinees who obtain 75 per cent or more marks shall be declared to have passed the examination with distinction.

COURSES OF STUDY, EXAMINATIONS AND DEGREES LEADING TO PROFESSIONS.

LAW.

Bachelor of Law (LL.B.).—The course extends over two academic years and is open only to Bachelor of Arts or Science of this or of any other recognised University. The B. Coms.'s of certain Universities and B.Sc. (Agr.) of the Nagpur University, are also eligible for admission to the course. There are two examinations, the Previous and the Final Examinations, at the end of the first and second years respectively. The following are the subjects for study and examination.

Previous Examination :—(1) Ancient Law and Jurisprudence, (2) Hindu Law, (3) Law of Partnership and Law relating to Sale of Goods, (4) Law of Contracts, (5) Law of Evidence, (6) Law of Crimes and Procedure and (7) Law of Torts and Law of Easements.

Final Examination:—(1) Private International Law and Roman Law, (2) Constitutional Law, (3) The Law of Land Tenures, (4) Law relating to Property, (5) Code of Civil Procedure and Limitation Act, (6) Principles of Equity, Law relating to Trusts and Law relating to Specific Relief and (7) Special Act and Mahomedan Law.

One paper is set in each of the seven subjects, both in the Previous and Final Examinations. Candidates who obtain 33 per cent of the marks in each subject and 50 per cent or more in the aggregate are qualified for a pass at each of the examinations, those obtaining 70 per cent or more of the aggregate marks obtainable at the two examinations taken together being placed in the First Class and other successful candidates in the Second Class.

Master of Laws (LL.M.):—The course is open to law graduates of this University and of other recognised Universities. At least two years' study under the direction of an approved person is necessary.

A candidate for the examination for the Degree of Master of Laws shall be examined in one of the following groups of papers, viz.—

A. Jurisprudence, B. Constitutional Law and International Law, C. Crime and Tort, D. Contracts including Mercantile Law, E. Hindu, Mahomedan and other Personal Laws and F. Property.

Each paper shall be of three hours' duration and shall carry 100 marks.

The candidates in the Groups A. Jurisprudence, B. Constitutional Law and International Law and C. Crime and Torts shall be held in alternate years commencing with the year 1943 and the examination in Groups D. Contracts including Mercantile Law, E. Hindu, Mahomedan and other Personal Laws and F. Property shall be held in alternate years commencing with the year 1944.

In order to be successful at the examination, an examinee shall obtain not less than 50 per cent marks in each of the papers. Examinees who obtain not less than 400 out of aggregate of 600 marks at the examination shall be placed in the first division and all other successful examinees in the second division.

Doctor of Laws (LL.D.):—The examination is open to those who have obtained the Master's Degree in Law of this University or any recognised University. Candidates should submit a thesis composed on some branch of Law or on the History or Philosophy of Law and if so desired, submit themselves for an oral examination with reference to the subject matter of the thesis.

AGRICULTURE

Intermediate Science (Agr.) Examination:—The course of study extends over two years subsequent to passing the High School Certifi-

cate Examination or any other recognised equivalent examination and candidates are required to study and be examined in (1) Agriculture, (2) Mathematics and Agricultural Engineering, (3) Chemistry, (4) Botany, (5) English and Class Work in Agricultural Extension.

In order to pass, a candidate must obtain 40 per cent of the aggregate marks, besides the prescribed minimum for each subject and paper. Successful candidates obtaining 60 per cent or more of the aggregate marks are placed in the first division; those obtaining less than 60 per cent but not less than 48 per cent are placed in the second division; and all other successful candidates in the third division.

B.Sc. (Agr.) Examination:—Candidates who have passed the Intermediate Examination are eligible for admission to the course which extends over two academic years. The subjects for study and examination are: (1) Agriculture, (2) Chemistry, (3) Botany and (4) Plant Pathology and Entomology and Class Work in Agricultural Extension.

In order to pass, a candidate must obtain in each subject and paper the minimum marks prescribed and in the aggregate not less than 40 per cent of the total marks obtainable. Successful candidates who gain 60 per cent or more of the aggregate marks shall be placed in the first division; those who gain not less than 48 per cent of the aggregate marks in the second and the rest in the third division.

In both the Intermediate (Agr.) and B.Sc. (Agr.) Examinations there are Practical Examinations in all subjects except English and students are required to pass them separately.

M.Sc. (Agr.):—Persons who have been admitted to the degree of Bachelor of Science (Agriculture) of this University or an equivalent recognised examination may offer themselves as candidates for the degree of Master of Science (Agriculture). Candidates have to submit published papers or thesis prepared under the direction of a supervisor approved by the Academic Council.

Ph.D. (Agriculture):—A person who has passed the examination for (1) the Degree of Master of Science or the degree of Bachelor of Science with Honours or (2) the Degree of Master of Science (Agriculture) of Nagpur University or (3) any other recognised equivalent examination or (4) the Diploma of the Associateship (a) of the Indian Institute of Science, Bangalore or (b) of the Imperial Agriculture Research Institute, New Delhi, or (c) the Indian Dairy Institute, Bangalore, or (d) the Imperial Veterinary Institute, Izzatnagar, or (e) the Indian Institute of Sugar Technology, Kanpur, under certain conditions, may offer himself as candidate for this degree. A candidate must prepare the thesis for the degree under a supervisor approved by the Academic Council.

Under the revised system it has been made obligatory for research students to stay at Nagpur or at other places within the territorial jurisdiction of the University and work more closely under the immediate supervision of their supervisors. Research students will be required to meet and discuss with their supervisors the plans and progress of their research work at least once in a fortnight during each academic year.

EDUCATION

Bachelor of Teaching (B.T. General and Basic) :—The course extends over one academic year subsequent to the taking of a degree of this or any recognised University. The Examination is in two parts, the First part consisting of Principles and Practice of Education, Educational Psychology, Methods of Teaching particular subjects including Music and Home Science, School Organisation and Hygiene, History of Education; and the Second Part being mainly a practical test in Teaching. For B.T. (Basic) there is a Part III consisting of (a) Organisation of Community Life activities (b) Training in Crafts. In addition to this, a candidate must have completed satisfactorily the following courses:

Physical Training, Pedagogical Drawing and English Phonetics. Five papers will be set in Part I, one on each of the subjects selected.

Candidates who obtain 60 per cent or more in the first part and 80 per cent or more in the second part are placed in the First Class; those obtaining 50 per cent in the first part and 60 per cent or more in the second part, in the Second Class, those obtaining 32 per cent of the aggregate marks in the first part and 40 per cent in the second part in the Third Class. For Part III in B.T. Basic, candidates obtaining 60 per cent or more in First Class, 50 per cent or more in the Second Class and 32 per cent of the aggregate in the Third Class.

M.Ed. :—1. (a) Any graduate in Arts or Science of a recognised University who has been admitted to the degree of Bachelor of Teaching of Nagpur University or to a degree recognised by Nagpur University as equivalent thereto, may offer himself as a candidate for the degree of Master of Education.

2. The examination shall consist of two parts as follows, viz. —

Part I.—A written examination in (1) Philosophy of Education (2) Advanced Educational Psychology (3) and (4) Two of the following viz.—

(i) Experimental Education, (ii) History and present state of education in India (iii) Educational Organisation and Administration in India with special reference to Madhya Pradesh and (iv) Comparative study of present day Educational Systems in the United Kingdom, U.S.A. and U.S.S.R.

Part II.—A thesis embodying the results of individual research in one of the subjects offered for Part I of the examination.

A student who has prosecuted a regular course of study for the M.Ed. course in the University Training College, or in any other institution admitted to the privileges of the University up to the M.Ed. standard, may be admitted to the examination in Part I after prosecuting such a course for a period of one academic year only and may submit his thesis for Part II after prosecuting research for a period of one academic year only.

3. One Paper shall be set in each of the subjects for Part I of the examination, the maximum marks for each paper being 100.

Diploma in Teaching.—The diploma course extends over two years and is open to those who have passed the Higher School Certificate Examination or an equivalent recognised examination.

The examination consists of two parts :—

PART I :

The following will be the papers in which the written examination will be held for the Dip. T. Examination.

Paper I.—Principles and Practice of Education,

Paper II.—Education Psychology,

Paper III.—School Organisation and School Hygiene,

Paper IV.—One of the following languages and its methodology :
Marathi, Hindi or Urdu.

Paper V.—English and its methodology,

Paper VI.—Special Methods of Teaching in one of the following subjects.—

(i) Mathematics and General Science,

(ii) Social Studies,

(iii) Physical Education.

PART II :

Practical Teaching.

The Practical Training of the candidates will be judged by—

(1) their teaching during the course of training,

(2) a final test — two lessons to be given of which only one should be a language.

Marks and classification shall be as follows :—

PART I :

Marks obtainable in each paper	..	100
Aggregate marks obtainable	..	600

PART II :

Marks obtainable during the course, as assessed by the	
Principal of the Training College	.. 100
Marks obtainable in the Final Test	.. 100
Aggregate marks obtainable	.. 200

In the examination in Part I, examinees obtaining not less than 360 marks shall be placed in the first division; those obtaining less than 360 marks but not less than 270 marks shall be placed in the second division; and those obtaining not less than 180 marks, in the third division.

In the examination in Part II, examinees obtaining not less than 160 marks shall be placed in the first division; those obtaining less than 160 marks but not less than 120 marks shall be placed in the second division; and those obtaining not less than 80 marks, in the third division.

In order to obtain the Diploma in Teaching an examinee must pass in Part I and in Part II.

Ph.D. in Education

Candidates who have obtained the degree of Master of Education of Nagpur University or any other recognised equivalent degree are eligible for this degree. Also a candidate who has passed the M.A., or M.Sc., degree in first or second division in some subjects other than Education and who has further passed the examination for the B.T. Degree in first or second division both in theory and practice may, for special reasons, be permitted to offer himself as a candidate for the degree. Every candidate shall prepare his thesis under the guidance of a supervisor to be appointed by the Academic Council. Under the revised system it has been made obligatory for research students to stay at Nagpur or at other places within the territorial jurisdiction of the University and work more closely under the immediate supervision of their supervisors. Research students will be required to meet and discuss with their supervisors the plan and progress of their research work at least once in a fortnight during each academic year.

MEDICINE*First M.B., B.S.*

For admission to the examination, candidates must have attained the age of seventeen years, and must have attended the regular course of Studies in an affiliated Medical College after passing Inter-Science Examination with Physics, Chemistry and Biology for one and half years in the following subjects. (1) Human Anatomy and (2) Physiology. There will be two papers, oral and Practical examination in each.

Second M.B., B.S.

The course extends over one and half academic years subsequent to passing the First M.B., B.S. examination or its equivalent. The candi-

dates are examined in (1) Pathology and Bacteriology (2 papers, oral and practical), (2) Pharmacology and Toxicology (1 paper, Sections A & B, oral and practical), and (3) Forensic Medicine (1 paper, Sections A & B, oral and practical).

Final M.B., B.S.

For admission to the examination, candidates must have passed the First M.B., B.S. Examination and Second M.B., B.S. Examination. Since passing the First Examination candidates must have attended a regular course of study for not less than three years in the subjects of study prescribed for the Second M.B., B.S. and Final M.B., B.S. Examination and passed the Second M.B., B.S. Examination at least one year previously. The candidates will be examined in (1) Medicine and Preventive and Social Medicine (2 papers, oral, practical and clinical), (2) Surgery, E.N.T. and Ophthalmology (2 papers, oral, practical and clinical), (3) Midwifery and Gynaecology (2 papers, oral, practical and clinical).

In order to be successful, candidates must obtain the prescribed minimum in each subject and 50 per cent in the aggregate. A successful candidate admitted to the Examination for the first time who secures 75 per cent marks in a subject is declared successful with distinction in that subject. The degree of M.B., B.S. is awarded only when, after passing the Final Examination, the candidates have worked for at least twelve months under a medical officer or practitioner and in an institution approved by the University.

A condensed M.B., B.S. course has been introduced for Licentiates, with effect from the Academic year 1952-53. Candidates who have passed the Final L.M.P. Examination are admitted to the two-year condensed M.B., B.S. course. Candidates who are admitted to the course are exempted from passing the First M.B., B.S. Examination, but they will be required to pass a college test in Anatomy and Physiology to the satisfaction of the Dean of the Medical College.

A Licentiate in Tropical Medicine of Calcutta or a holder of the Diploma in Tropical Medicine and Hygiene or Gynaecology and Obstetrics of Bombay or D.T.M. of Calcutta or D.L.G.O. of Madras or the Diploma of Lying-in-Hospital of Dublin (Ireland) will be allowed to complete the condensed M.B., B.S. course within eighteen months.

The following Post-Graduate Diploma and degrees in Medicine have been instituted viz.—

- (1) Diploma in Ophthalmology,
- (2) Master of Science,
- (3) Doctor of Medicine,
- (4) Master of Surgery,
- (5) Master of Obstetrics and Gynaecology,
- (6) Doctor of Philosophy.

A candidate who has been admitted to the M.B., B.S. degree of Nagpur University or a degree recognised by the University as equivalent thereto and (1) who has been a House Officer for 12 months and successfully prosecuted a course for one academic year or (2) who has been a House Surgeon for one year and prosecuted a course for six months, is eligible for admission to the Examination for Diploma in Ophthalmology.

A candidate who has been admitted to the M.B., B.S. Degree of Nagpur University or a degree recognised by the University as equivalent thereto and prosecutes study and research for two academic years in Anatomy, Physiology, Pharmacology, Pathology, or Bacteriology is eligible for admission to the Examination for the degree of Master of Science.

A candidate who has been admitted to the M.B., B.S. degree of Nagpur University or a degree recognised by the University as equivalent thereto and who has been House Officer for twelve months and carries on research and study for two academic years are eligible for admission to the Examination for degrees of Doctor of Medicine, Master of Surgery and Master of Obstetrics and Gynaecology.

A candidate who has passed the examination for the degree of M.Sc. in the Faculty of Medicine or an equivalent degree and carries on research for two academic years under an approved Supervisor is eligible for the degree of Doctor of Philosophy in the subjects Anatomy, Physiology, Pharmacology, Pathology and Bacteriology.

COMMERCE

Intermediate Examination in Commerce and Bachelor of Commerce Examination :— The course for each of the Intermediate examination in Commerce and Bachelor of Commerce examination will extend over a period of two years. Inter-Commerce Course is open to those who have passed the Higher School Certificate Examination or its equivalent. Every candidate for the Intermediate Examination in Commerce is examined in (1) English; (2) Group—(i) Economics, (ii) Business Methods and Elementary Banking; (3) Sales Organization and Service; (4) Book-keeping and Accountancy; (5) Commercial Geography; (6) Composition in one of the following languages, viz., Hindi, Marathi, Urdu, Bengali, Telugu, Gujarati and Oriya.

B. Com. Course is open to those who have passed the I. Com. or its equivalent examination.

The subjects for study for the degree of B. Com are as follows :
(1) Group—(i) English, (ii) Secretarial Practice; (2) Money, Banking and Foreign Exchange; (3) Statistics; (4) Business Organisation; (5) Indian Mercantile and Industrial Law; (6) Modern Economic Develop-

ment of India and (7) one of the following subjects, viz.—(a) Advanced Accounting and Auditing; (b) Advanced Banking; (c) Indian Cotton Industry; (d) Insurance; and (8) *Viva Voce*.

Successful examinees obtaining sixty per cent or more of the aggregate marks are placed in the first division, those obtaining less than sixty per cent but not less than forty-eight per cent in the second division, and all other successful examinees obtaining less than forty-eight per cent but not less than forty per cent in the third division.

Master of Commerce:—The course extends over two academic years subsequent to passing the B.Com. Examination of this University or any recognised equivalent examination of another University. Every candidate for the examination shall be examined in (a) two compulsory papers—(i) Modern Industrial and Commercial Development (U.K., U.S.A., U.S.S.R., Germany and Japan), (ii) Organisation of markets; (b) any two of the following papers—(i) Transport, (ii) Money Markets and Foreign Exchange, (iii) State and Economics Welfare, (iv) Corporation Finance, (v) Co-operation, (vi) Labour and Urban Problems, (vii) Applied Statistics, (viii) Cost Accounting and (ix) Income Tax Law and Practice; (c) three papers on any one of the following subjects of special study.—(i) Principles and Practice of Economic Planning, (ii) Industrial and Commercial Development of India, (iii) Rural Economic Problems and (d) *Viva Voce*. A thesis may be offered in lieu of the three papers on a subject of special study.

Successful examinees obtaining sixty per cent or more of the aggregate marks are placed in the first division, those obtaining less than sixty per cent but not less than forty-eight per cent in the Second Division and all other successful examinees obtaining less than forty-eight per cent but not less than thirty-six per cent in the third division.

The M.Com. examination will now be held in two parts, viz.—Part I and Part II. The first examination for M. Com. Part I has been held in 1957.

Ph.D. in Commerce:—Candidates who have obtained the degree of Master of Commerce of Nagpur University or any other recognised equivalent degree are eligible for this degree after prosecuting research for two years. Every candidate shall prepare his thesis under the guidance of a Supervisor to be appointed by the Academic Council.

Under the revised system it has been made obligatory for research students to stay at Nagpur or at other places within the territorial jurisdiction of the University and work more closely under the immediate supervision of their supervisors. Research students will be required to meet and discuss with their supervisors the plans and progress of their work at least once in a fortnight during each academic year.

EXAMINATION FEES

I. Faculty of Arts.

	Rs.
1. Intermediate Examination Arts	.. 30
2. B.A. (Pass) Examination	.. 40
3. M.A. (Part I) Examination	.. 35
4. M.A. (Part II) Examination	.. 35
5. Ph.D. (Arts) Examination	.. 175
6. D.Litt. Examination	.. 200
7. Diploma in Journalism	.. 50
8. Certificate in Journalism	.. 40
9. Diploma in Local Self-Government	.. 40
10. Diploma in Library Science	.. 30
11. First Examination for Diploma in Art	.. 30
12. Final Examination for Diploma in Art	.. 35
13. Junior Diploma in Oriental Learning	.. 5
14. Senior Diploma in Oriental Learning	.. 8
15. Higher Diploma in Oriental Learning	.. 10

II. Faculty of Science.

16. Intermediate Examination in Science	.. 35
17. B.Sc. (Pass) Examination	.. 45
18. M.Sc. (Part I) Examination	.. 35
19. *M.Sc. (Part II) Examination	.. 40
20. Ph.D. (Science) Examination	.. 175
21. D.Sc. Examination	.. 200
22. First B.Tech. Examination	.. 40
23. Final B.Tech. (Part I) Examination	.. 40
24. Final B.Tech. (Part II) Examination	.. 40
25. M.Tech. Examination	.. 100
26. First B.E. Examination	.. 45
27. Second B.E. Examination	.. 50
28. Final B.E. Examination	.. 60
29. First B.Pharm. Examination.	.. 40
30. Final B.Pharm. Examination	.. 40
31. First Examination for Diploma in Engineering	.. 35
32. Intermediate Examination in Architecture	.. 35
33. Final Examination for Diploma in Engineering	.. 45

III. Faculty of Law.

34. Previous LL.B. Examination	.. 35
35. Final LL.B. Examination	.. 40
36. LL.M. Examination	.. 200
37. LL.D. Examination	.. 200

* For M.Sc. (Part II) Examination in Mathematics the prescribed fee is Rs. 35.

	Rs.
<i>IV. Faculty of Education.</i>	
38. Diploma in Teaching ..	25
39. B.T. (General) Examination ..	40
40. B.T. (Basic) Examination ..	40
41. M.Ed. (Part I) Examination ..	50
42. M.Ed. (Part II) Examination ..	50
43. Ph.D. (Education) ..	175
<i>V. Faculty of Agriculture.</i>	
44. Intermediate Examination in Science (Agriculture) ..	35
45. B.Sc. (Agr.) Examination ..	45
46. M.Sc. (Agr.) Examination ..	100
47. Ph.D. (Agr.) Examination ..	175
<i>VI. Faculty of Medicine</i>	
48. First M.B., B.S. Examination ..	40
49. Second M.B., B.S. Examination ..	60
50. Final M.B., B.S. Examination ..	60
51. Diploma Examination in Ophthalmology ..	75
52. M.Sc. (Medicine) Examination ..	100
53. M.D. for Part I and Part II each ..	100
54. M.S. for Part I and Part II each ..	100
55. M.O. for Part I and Part II each ..	100
<i>VII. Faculty of Commerce.</i>	
56. Intermediate Examination in Commerce ..	30
57. B.Com. Examination ..	40
58. M.Com. (Part I) Examination ..	30
59. M.Com. (Part II) Examination ..	30
60. M.Com. (Part III) Examination ..	60
61. Ph.D. Examination ..	175

OSMANIA UNIVERSITY

INTRODUCTORY

The Osmania University, established by a Charter in 1918, is the first attempt in India to impart education in an Indian Language, English being a compulsory second language. It has ten Faculties, namely, Agriculture, Arts, Commerce, Education, Engineering, Law, Medicine, Religion and Culture, Science and Veterinary Science. All the Faculties except Medicine, are housed in buildings within the University campus which covers an area of nearly 2,000 acres, situated four miles east of the City of Hyderabad.

The ultimate aim of the University has been laid down as the adoption of the Federal Language as the medium of instruction. In the transitory stage, the medium of instruction in the professional Faculties is English and in Arts and Science there are parallel classes in English and Hindustani media the latter with both the Persian and Nagri scripts. Just as English is recognised as a medium, the regional languages (Telugu, Marathi and Kannada) are also permissible as media and the University may open parallel classes in those media if and when the requisite number of qualified staff, the text-books and the finances are available.

The study of a Regional or an allied classical language has been made compulsory up to the first degree stage in Arts, Science and Commerce. The Faculty of Theology has been replaced by the Faculty of Religion and Culture, which includes the study of comparative religion also.

Besides six University Colleges (including 4 professional Colleges) there are six constituent degree Colleges of Arts and Science, teaching through the medium of English and one of these being Women's College provide both English and Hindustani media. There are two Intermediate constituent colleges. There is also a constituent Law College and nine affiliated degree colleges including two Medical and a Training College. Besides these, there are two Evening Colleges one Degree and one Intermediate, meant for those in employment. The Degree of M.Com. has been instituted in the Faculty of Commerce with effect from the Academic Year 1952-53.

There are altogether 17,515 students studying in the University.

The Department of Translation and Publication was founded about a year before the establishment of the University in order to provide the latter with text-books for different classes. Altogether 530 books were

translated and printed in Arts, Engineering, Medicine, Science and other subjects. The work of Translation and Publication which was in Urdu formerly, is now being done in Hindustani under certain principles laid down by a Board established for the purpose. One of the principles is to retain Western notations, numerals and even punctuations, and another is to retain international scientific and technical terminology or terminology which is universally accepted or used.

The University is now both a teaching and affiliating University. It has 24 affiliated colleges including a Medical College.

CONSTITUTION OF THE UNIVERSITY

Though the University is wholly financed by the Government, it enjoys administrative autonomy, its Council enjoying the powers of the Government in respect of all University matters. The Head of the Government of the State is *Ex-Officio* Chancellor. The Vice-Chancellor is a whole-time officer appointed by the Government and generally holds office for a term of three years. The Sénate is on the model of most of the Indian Universities with fair representation of the staff and of public elements. There are also the Finance Committee and the Academic Council which are similarly broad-based.

OFFICERS OF THE UNIVERSITY

Patron :

His Exalted Highness the Nizam, Nawab Mir Osman Ali Khan,
G.C.S.I., G.B.E.

Chancellor :

Hon'ble N. Sanjeeva Reddy, Chief Minister

Vice-Chancellor :

Shri D. S. Reddy, M.A. (Oxon).

Registrar :

Dr. I. Topa, D.Phil. (Freiburg).

Deputy Registrar :

Shri Syed Chand.

Chief Superintendent, Accounts (Treasury)

Shri Balkistayya.

Chief Superintendent, Accounts (General)

Shri A. S. R. Anjaneyulu, B.A. (Madras), Higher Accounts.

Accounts Officer :

Shri, Upendranath, B.Sc., Higher Accounts.

Controller of Examinations :

Shri L. B. Deshpande, B.Sc. (Madras).

Chief Superintendent, (Academic)

Shri V. Raghvaiah, B.A.

Librarian :

Shri Masood Yazdani, B.A. (Alig.), Dip. L.Sc. (Madras).

Resident Medical Officer :

Dr. P. L. Narayan Rao, L.M.P.

Chief Sports Organizer :

Shri Ghous Mohd. Khan.

Assistant Engineer :

Shri Raghuvver Chander, B.E. (Osmania).

Warden, University Hostels :

Shri S. A. R. Qadri, M.A. (Osmania).

Assistant Warden :

Shri W. J. Lazrus, B.A.

Director, Department of Publication and University Press :

Dr. I. Topa, D.Phil. (Freiburg).

Director, Nizomiah Observatory :

Dr. Akbar Ali, M.A. (Osmania), B Sc Hons. (London),

Ph. D. (London), F.R.A.S.

Horticulturist :

Shri G. K. Iyengar.

UNIVERSITY COLLEGE OF ARTS AND COMMERCE.

<i>Principal</i>	.. Qadir, M. A., M.A. (Madras), B.Sc. (Econ.) London, Professor.
<i>Economics</i>	.. Qadir, M. A., M.A. (Madras), B.Sc. (Econ.) London, Professor. Hussain, S. A., M.A., LL.B. (Lucknow) L.T. (Allah.), Reader. 3 Lecturers.
<i>English</i>	.. Acharya, K. N., M.A. (Mysore), Reader. 15 Lecturers.
<i>Geography</i>	.. Ahmed. S., B.A., B.T. (Alig.), M.A. (Edin.), F.R.C.S., Reader. 4 Lecturers.
<i>Hindi</i>	.. Pandeya, R. N., M.A., Ph.D. (Nagpur), Lecturer. 2 other Lecturers.

<i>History</i>	.. Muneeruddin, K., M.A. (Osmania), Reader. Sajjanlal, Q. A., M.A. (Bombay), Dip. Ed. (Osmania), Reader. 1 Lecturer.
<i>Kannada</i>	.. Bhimsen Rao, D. K., M.A. (Mysore), Professor. 2 Lecturers.
<i>Marathi</i>	.. Madhekar, R. B., M.A. (Madras), Reader. 2 Lecturers.
<i>Philosophy</i>	.. Valiuddin, M., M.A., Ph.D. (London), Bar-at-Law, Professor. Salahuddin, M., M.A. (Dacca), Reader. Wahiduddin, S., Ph.D. (Marburg), Reader. 1 Lecturer.
<i>Political Science</i>	.. Rajgopal, P. V., M.A. (Madras), Reader. 2 Lecturers.
<i>Persian</i>	.. Husaini, Q. K., M.A., LL.B. (Osmania), Ph.D (London), Reader. Farooqi, L. A., M.A., LL.B. (Osmania), Reader.
<i>Sanskrit</i>	.. Sharma, A., M.A. (Alig.), Ph.D. (Munich), Professor. 3 Lecturers.
<i>Sociology</i>	.. Hasan, J., Ph.D. (Heidelberg), Professor. 3 Lecturers.
<i>Telugu</i>	.. Laxmiranjanam, K., M.A. (Madras), Professor. 3 Lecturers.
<i>Urdu</i>	.. Sarwari, A. Q., M.A., LL.B. (Osmania), Professor. Mohd., S., M.A. (Osmania), Reader. Omer, M. B., M.A. Eng. (Osmania), M.A. Urdu (Osmania), Reader. Qateel, A. H., M.A., Ph.D. (Osmania), Reader.
<i>Journalism</i>	.. Murthy, N. V. K., B.A. Hons. (Mysore), Dip. in Journ. (Osmania), M.A. (Indiana), Lecturer. 1 other Lecturer.

- Commerce* .. Raghavendra Rao, B., M.A. (Calcutta),
Lecturer.
3 other Lecturers.
- Religion and Culture* .. Fazle Ahmed, Reader.
Yousufuddin Taher, M.A., Ph.D.
(Osmania), Reader.
2 Lecturers.

UNIVERSITY COLLEGE OF SCIENCE.

- Principal* .. Sayceduddin, M., B.Sc. (Bombay), M.A.
(Edin.), F.R.M.S., F.L.S. (London),
F F.Sc., F.R.S., Professor.
- Botany* Sayeeduddin, M., B.Sc. (Bombay), M.A.
(Edin.), F.R.M.S., F.L.S. (London),
F.F.Sc., F.R.S., Professor.
Salam, A., M.Sc. (Osmania), Ph.D.
(Belfast), Reader.
Waheed, A., M.Sc., (Osmania), Reader.
Saxena, M. R., M.Sc. (Osmania), Ph.D.
(London), Reader.
9 Lecturers.
- Chemistry* Subba Rao, N. V., D.Sc. (Andhra),
Ph.D (London), D.I.C., F.R.I.C.,
Professor.
Tahir, N. A., M.Sc. (Osmania), Ph.D.
(London), Reader.
Rahman, K., M.Sc. (Osmania), Reader.
Shah Mohd., S., M.Sc. (Osmania), Ph.D.
(London), Reader.
17 Lecturers.
- Chemical Technology* Kulkarni, B. S., M.Sc. (Nagpur), Ph.D.
(Bombay), Professor.
Abde Ali, M.Sc. (Illinois), Reader.
Zaidi, S. H. R., M.Sc. (Osmania), M.Sc.,
Ph.D. (Brooklyn), Reader.
10 Lecturers.
- Geology* Ahmeduddin, S. M., B.A. (Osmania),
M.Sc. (Manchester), F.R.G.S.,
F.G.S., F.I.S. (London), Reader.
3 Lecturers.

Mathematics

Raghavender Rao, M.A. (Osmania),
Reader.
Vishwanathan, B., M.A. (Osmania),
Ph.D. (Andhra), Reader.
Ahmed, A., M.A., Ph.D. (Osmania),
M.Sc. (Cantab), Reader.
2 Lecturers.

Physics

Satyanarayan, R., B.A. (Osmania),
B.Sc. Hons. (London), Ph.D. (Lon-
don), A.R.C.S., Professor.
Iyengar, K. S., M.Sc. (Osmania), Dip.
Ed., Ph.D. (Osmania), Reader.
Puranik, P. G., M.Sc. (Osmania), Ph.D.
(Osmania), Reader.
Venkat Krishniah, K., M.Sc. (Andhra),
Ph.D. (Osmania), Reader.
Vardiah, V. V., M.Sc. (Andhra), Ph.D.
(Osmania), Reader.
Osmani, M. A., M.Sc. (Osmania), Reader.
10 Lecturers.

Zoology

Singh, S. N., M.Sc. (Alig.), Ph.D. (Lon-
don), Professor.
Omer Khan, M.Sc. (Osmania), Ph.D.
(London), Reader.
Jaiswal, G.P., M.Sc., Ph.D. (Osmania),
Reader.
Mohsin, S. M., M.Sc. (Osmania), Ph.D.
(Osmania), Reader.
Mehdi Ali, S., M.Sc., Ph.D. (Osmania),
Reader.
Qadri, S. S., M.Sc. (Osmania), Ph.D.
(London), Reader.
7 Lecturers.

NIZAM COLLEGE.**Principal**

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History and Politics

Rama Rao, M., M.A., Ph.D. (Madras),
B.Ed. (Andhra), Reader.
5 Lecturers.

Arabic

Khan, A. H., M.A., B.O.L. (Madras),
Lecturer.
1 other Lecturer.

Commerce

.. Andriah, M., M.Com., Lecturer.

<i>Economics</i>	.. Prasad Rao, M., M.A. (Madras), Reader. 4 Lecturers.
<i>English</i>	.. Rajaratnam, A. P., M.A. (Madras), Reader. 7 Lecturers.
<i>Geography</i>	.. Bhan, G. S., M.A. (Alig.), Lecturer.
<i>Hindi</i>	.. Pande, R. K., M.A. (Lucknow), Lecturer. 1 other Lecturer.
<i>Kannada</i>	.. Mathad, F. G., M.A. (Madras), Lecturer. 1 other Lecturer.
<i>Marathi</i>	.. Kulkarni, S. R., M.A. (Nagpur), Ph.D. (Osmania), Lecturer. 1 other Lecturer.
<i>Mathematics</i>	Datar, S. S., M.A., Ph.D. (Bombay), Reader. 5 Lecturers.
<i>Persian</i>	.. Rasheed, G. D., M.A. (Osmania), Reader.
<i>Philosophy</i>	.. Khundmiri, S. A., M.A. (Osmania), Lecturer. 1 other Lecturer.
<i>Sanskrit</i>	.. Upadhyaya, H. C., M.A. (Osmania), Lecturer. 1 other Lecturer.
<i>Tamil</i>	.. Sunderam, P. M., M.A. (Annamalai), Reader. 1 other Lecturer.
<i>Telugu</i>	.. Gopal Krishna, M.A. (Osmania), Lec- turer. 2 other Lecturers.
<i>Urdu</i>	.. Shuttari, S. H., M.A. (Osmania), Lec- turer. 1 other Lecturer.
<i>Botany</i>	Nasrullah, K., M.Sc. (Osmania), Lec- turer. 2 other Lecturers.
<i>Chemistry</i>	Raghunathan, S., M.Sc. (Madras), Rea- der. 7 Lecturers.

<i>Physics</i>	Raman, S. V., M.Sc. (Madras), Reader. Rajeshwar Rao, N., M.Sc., D.Sc. (Andhra), Reader. 5 Lecturers.
<i>Zoology</i>	Qureshi, Q. H., M.Sc. (Osmania), Ph.D. (London), D.I.C. (London), Reader. 2 Lecturers.

WOMEN'S COLLEGE.

<i>Principal</i>	.. Dr. S. Shri Devi, M.A. (Madras), M.Ed. Ph.D. (Columbia).
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EVENING COLLEGE OF ARTS AND COMMERCE, HYDERABAD.

<i>Principal</i>	.. Shri Imtiaz Husain Khan, B.Com.Hons. (London).
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CITY SCIENCE COLLEGE, HYDERABAD.

<i>Principal</i>	.. Shri Ghiasuddin Ahmed.
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CHADERGHAT COLLEGE, HYDERABAD.

<i>Principal</i>	.. Dr. S. M. Qadri Zore, M.A., Ph.D. (London).
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SCIENCE COLLEGE, SAIFABAD, HYDERABAD.

<i>Principal</i>	.. Prof. S. Mohd. Ali Khan, B.A., B.Sc. Hons. (London), A.R.C.S.
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SECUNDERABAD ARTS AND SCIENCE COLLEGE.

<i>Principal</i>	.. Shri R. M. Bhusari, M.A. (Nagpur), LL.B. (Osmania).
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EVENING COLLEGE OF ARTS AND COMMERCE, SECUNDERABAD.

<i>Principal</i>	.. Shri Abdul Majeed Siddiqui, M.A., LL.B. (Osmania).
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ARTS AND SCIENCE COLLEGE, WARANGAL.

<i>Principal</i>	Prof. B. V. Ram Narsu, M.A., B.Ed. (Madras).
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UNIVERSITY COLLEGE OF EDUCATION.

<i>Principal</i>	Shrimati Zohra Begum, M.A. (Osmania), M.Ed. (Leeds), Reader.
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<i>Reader</i>	Shri Ghiasuddin Ahmed, M.A., LL.B. (Alig.), Ed.B. (Hons.) (Glasgow).
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Lecturers

- Sri Laxmi Narayana Naidu, M.Ed.
 „ Syed Faruq Hussain, B.A.,
 Dip. in Physical Education.
 „ Ishrat Ali Khan, M.A. (Alig.),
 M.Ed. (Osm.).
 „ Balbir Prasad, M.A.,
 M.Ed. (Osmania).
 „ K. Vedanthachari, M.Ed. (Osm.),
 M.A. (Edn.) (London). (On
 Foreign Service).
 „ Manik Rao Deshpande, M.Sc.,
 M.Ed. (Osmania).
 „ N. V. Tirtha, B.Sc. (Hons.),
 M.Ed. (Osmania). (On long leave)
 „ C. S. Subba Rao, M.A., M.Ed.
 (Officiating).
 Shrimati Ashima Kamal, M.A.,
 Ed B (Hons.) (Glasgow).

DEPARTMENT OF EXTENSION SERVICES.

Co-ordinator

Shri R. S. James, M.A., L.T.

Asst. Co-ordinator

„ S. Krishna Rao, M.A., B.Ed.

UNIVERSITY COLLEGE OF AGRICULTURE.

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Ph.D. (Wales), Professor.*Farm*Shri Mohd. Sayeedullah Khan,
Farm Supdt.*Agronomy*

Professor — Vacant.

Lecturers

- Shri R. Surya Narayan Rao, B.Sc.Ag.
 (Madras), (On Deputation).
 „ Khurshid Ahmed (Temporary).
 „ K. Bhaskaran, B.Sc.Ag.
 (Madras).

*Plant Breeding Protection and Entomology**Professor**Lecturers*

- Shri B. V. Ramana Rao, M.Sc.
 (Bombay).
 Dr. Hamid Ali, M.Sc., Ph.D.
 (U.S.A.).

*Agricultural Chemistry**Lecturers*Dr. T. M. Vithal Rao, B.Sc. (Bombay),
Ph.D.

Vacant.

*Animal Husbandry**Lecturer*

Dr. B. T. Karnani, M.Sc., Ph.D.

*Agricultural Engineering**Lecturers*Shri T. Satya Narayan Rao, B.A.
(Alig.), B.Sc.Ag. (Hons.),
(Bombay).
„ K. S. Suryanarayana, B.Sc.Ag.
(Bombay), Lecturer in Agri-
cultural Economics.*Expansion Scheme**Agronomy**Lecturer*Shri Mohd. Yasin, B.Sc.Ag.
(Osmania) (On Deputation).*Horticulture**Lecturer*Shri Mohd. Ahmedullah, B.Sc.Ag.
(Osmania), Post Graduate Dip.
in Horticulture.*Animal Husbandry**Lecturer*

Shri O. Sundra Rama Reddy, B.V.Sc.

*Engineering**Lecturer*Shri Bhayya Ramachandra Rao Birewar,
B.Sc.Ag. (Nagpur), B.Sc.Ag.
(Engg.) (Allahabad).

UNIVERSITY COLLEGE OF ENGINEERING

*Principal*Prof. Ziauddin Ansari, M.A. (Osm.),
B.Sc. (Hons.).*Civil Engineering**Professor*

Vacant

*Readers*Shri Mohd. Hajizullah, B.Sc. (Engg.)
(Rangoon).
„ V. G. Palnitker, B.E.
(Temporary Lecturer).
„ Abdur Rasheed, B.A., B.E.

<i>Lecturers</i>	Sri Syed Ismail, B.E. (Osm.).
	„ Mohd. Fakhruddin, B.E.
	„ Syed Tahir Hussain, B.E.
	„ S. M. Siddiqi Quadri, M.S. (Michi.).
	„ Rayaprolu Anjaneyulu, B.E. (Temporary Lecturer).
	„ Narayan Rao Janoalker, M.A. (Maths.) (Osm.).

Mechanical Engineering

<i>Professor</i>	Shri Abid Ali, B.Sc. (Madras), B.Sc. (Hons.) (London).
<i>Reader</i>	Shri K. Ramanujacharya, B.Sc. (Engg.) (Benares).
<i>Lecturers</i>	Shri Kumarswamy, B.Sc. (Met.) (Benares).
	„ N. P. R. Vithal, B.E. (Rajputana).

Workshop

<i>Superintendent</i>	Shri S. R. Beedker, B.E. (Osmania) (On Foreign Service).
	„ M. A. Manam, B.E. (Osmania) (Temporary Lecturer).

Electrical Engineering

<i>Professor</i>	Shri V. M. Gadgil, B.Sc. (Madras), B.Sc. (Hons.) (London).
<i>Lecturers</i>	Shri Akhter Hussain, M.Sc. (Alig.), B.S. (Mech. & Elec. Engg.) (U.S.A.).
	„ K. V. P. Ranga Rao, B.E. (Osmania).

Special Batch I (G. O. H.)

<i>Professor</i>	Shri Mohd. Hafizullah, B.Sc. (Alig.), B.Sc. (Engg.) (Rangoon).
<i>Lecturers</i>	Shri Abdul Hai Ansari, B.E. (Osmania).
	Vacant.

Special Batch II (G. O. H.)

<i>Reader</i>	Shri S. M. S. Quadri, M.S. (Mich.).
<i>Lecturers</i>	Shri M. Roshan Ali Khan, B.E. (Osmania).
	„ B. Satyanarayana Murthy, B.E. (Osm.).

*Development Scheme (G. O. I.)**Mechanical Engineering**Lecturer*

Vacant.

*Electrical Engineering**Lecturer*Shri D. V. R. Vithal, B.E. (Tele.),
(Madras).*Expansion Scheme (G. O. I.)**Reader*

Shri M. Abdul Ali, B.Sc. (Victoria).

*Lecturers*Shri Telpula Venkoba Rao Laxman Rao,
B.E. (Rajputana).*Mining Scheme (G. O. I.)**Professor*Shri H. S. Seshagiri Rao, B.Sc.,
A.I.S.M., M.M.G.I.UNIVERSITY COLLEGE OF VETERINARY SCIENCE AND
ANIMAL HUSBANDRY*Principal*Dr. M. Habib Khan, M.R.C.V.S.
(London). (on Foreign Service).
Dr. Sajuddin Mohamad Siddiqui,
B. V.Sc. (Osmania), (Temp. Lecturer)*Animal Husbandry**Professor*

—Vacant—

*Lecturers*Dr. C. Venkateshwara Rao, M.Sc.,
B.V.Sc. (On Deputation).
Dr. K. Prakash Rao, B.V.Sc. (Osmania).
(Temp. Lecturer).
Dr. Vasudev Rao Jetker, Dip. in Vet. Sc.*Anatomy**Lecturers*Dr. C. V. Kanan, B.Sc., B.V.Sc.
(On Foreign Service).
Dr. Venkatakrishna Reddy, B.V.Sc.
(Temp. Lecturer).
Dr. P. Srinivasan, G.M.V.C., B.V.Sc.,
M.Sc.*Physiology**Lecturers*Dr. M. Ahmad Hussain, G.M.V.C.
Principal. (Madras).
Dr. Vasanth Rao Sadeker, B.Sc., B.V.Sc.*Pharmacology**Lecturer*Dr. M. Taquiddin Ahmed, B.V.Sc.
(Calcutta).

*Pathology and Bacteriology**Lecturers*

Shri M. Emamuddin, M.Sc., M.S. (Mich).
 Dr. Vasanth Rao Pargownker,
 G.B.V.C. (On Deputation).
 Dr. R. Ramchandra Reddy, B.V.Sc.
 Dr. D. Bhim Reddy, B.V.Sc. (Osmania).
 (Appointed as Regional Sterility Officer)
 Dr. Venkata Rao, B.V.Sc. (Osmania).

*Medicine**Lecturer*

Dr. V. Ramachandra Rao, G.M.V.C., P.G.

*Surgery**Lecturers*

Dr. R. Srinivas Raghvan, B.V.Sc.
 Dr. V. Rayappa Reddy, B.V.Sc.,
 G.M.V.C.

CATTLE STERILITY SCHEME (G. O. I.)

Reg. Sterility Officer

Dr. D. Bhim Reddy, B.V.Sc.

COLLEGE OF LAW

Principal

Shri G. C. V. Subba Rao, B.Sc., M.L.

Readers

Shri Mohd. Waheedullah Khan, B.Sc.,
 LL.M. (Osmania).
 Shri Vinayak Rao Rambaore, B.A., LL.M.
 (Osmania).
 Shri Gopal Rao Apsingiker, M.A., LL.B.
 Shri Mohd. Murtuza Ali B.A.,
 LL.B. (Osmania), LL.B. (Lond.).
 Shri Vasudev Pillay, B.A., LL.M.
 (Osmania).
 Shri T. S. Ananthanarayan B.A., LL.B.
 (Osmania).

LIST OF MEMBERS, UNIVERSITY COUNCIL—1954

1. Dr. S. Bhagavantam, Vice-Chancellor.
2. Shri Sethu Madhava Rao, Director, Public Instruction, Hyderabad.
3. Shri C. Damodhar Reddy, Financial Secretary and Treasurer of the Osmania University.
4. Dr. G. S. Melkote, Minister for P.W.D. Govt. of Hyderabad.
5. Justice P. J. Reddy, Chief Justice, High Court, Hyderabad.
6. Prof. M. Sayeeduddin, Principal, College of Science, Osmania University.

7. Prof. M. S. Doraiswami, Principal, College of Arts, Osmania University.
8. Prof. Ziauddin Ansari, Principal, College of Engineering, Osmania University.
9. Prof. B. V. Ram Narsu, Principal, Inter College, Warangal.
10. Shri K. S. Vaidya, Speaker, Legislative Assembly.
11. Shri Gopal Rao Ekbote, Education Minister, Govt. of Hyderabad.
12. Shri Madapati Hanumantha Rao.
13. Shri J. V. Narsing Rao.
14. Shri Vasudev K. Naik.
15. Dr. Syed Husain, Principal, Nizam College.
16. Shri P. V. Rajgopal, Lecturer, Nizam College.

INCOME OF THE UNIVERSITY FOR THE YEAR 1956-57.

	Rs.
Block Grant from Government ..	51,73,200
Fee :—	
Tuition Fee ..	8,39,704
Examination Fee ..	6,92,944
Fee for Residence ..	1,14,252
Other Fees ..	2,25,721
Sale of Publications and Forms ..	34,460
Income from University Press ..	44,614
Buses ..	41,479
Agricultural Farm, Lands and sale of Pasture ..	4,620
Veterinary Dairy Farm ..	27,472
Rent of Houses, Electricity and Water supply,	
Income from materials supplied to work ..	1,90,349
Interest on Investments :—	
(i) Govt. Grant out of E. P. T. ..	11,153
(ii) Donation for Award of Medals ..	837
(iii) Donation for Award of Yazdun Fellowship ..	260
(iv) Hyderabad State Development Loan ..	5,900
(v) Provident Fund Investments	
Medical Exam. Fee ..	26,120
Total ..	74,33,085

**BUDGET EXTRACT OF ESTIMATED EXPENDITURE OF
THE UNIVERSITY FOR 1956-57.**

INSTITUTION	AMOUNT RS.
I. University :	
(a) Office ..	3,06,871
(b) Academic ..	6,65,591
(c) Audit Office ..	32,179
(d) Library ..	1,12,698
(e) Night Guards ..	7,916
(f) Transport and Students Welfare Dept. ..	1,29,778
(g) Hostels and Dining Halls ..	1,50,390
II. University Colleges :	
(a) Arts and Commerce ..	6,31,189
(b) Science ..	8,92,134
(c) Education ..	1,15,569
(d) Agriculture ..	1,94,403
(e) Engineering ..	3,13,051
(i) 1st Scheme regarding addition of 80 seats ..	53,532
(ii) 2nd Scheme regarding addition of 80 seats	
(iii) 3rd Scheme of development	
(f) Veterinary Science and Animal Husbandry ..	2,32,760
III. Constituent Colleges :	
(1) College of Law ..	1,06,020
(2) Nizam College ..	5,94,042
(3) Women's College ..	4,41,478
(4) Evening College, Hyderabad ..	1,46,107
(5) City Inter Science College ..	3,30,278
(6) Choderghat College ..	2,27,181
(7) Saifabad Science College ..	3,70,696
(8) Mahboob College, Secunderabad ..	1,86,407
(9) Evening College, Secunderabad ..	51,643
(10) Arts and Science College, Warangal ..	1,51,333
(11) Aurangabad and Gulbarga Colleges	
IV. (i) Nizamiah Observatory ..	60,682
(ii) Scheme to be financed jointly by Govern- ment of India and University	
V. Department of Publication and University Press ..	1,29,407
VI. Estate and University Gardens ..	5,41,695
VII. Residency Gardens ..	33,199

INSTITUTION	AMOUNT Rs.
VIII. N.C.C.	
(1) 3rd Andhra Battalion ..	52,600
(2) Andhra Signal Section ..	26,338
(3) 1st Hyderabad Girls Troop ..	20,258
(4) Aurangabad Indep. Coy. ..	22,741
(5) Engineering Platoon ..	16,189
IX. Recurring and non-recurring items ..	90,000
Grand Total ..	74,36,355

**NUMBER OF STUDENTS IN THE UNIVERSITY IN THE
ACADEMIC YEAR 1956-57**

	<i>Men</i>	<i>Women</i>	<i>Total</i>
1. Faculty of Arts ..	5,164	930	6,094
2. Faculty of Commerce ..	1,186	4	1,190
3. Faculty of Science ..	6,143	968	7,111
4. Faculty of Agriculture ..	149	6	155
5. Faculty of Vet. Science ..	316	—	316
6. Faculty of Medicine ..	632	—	632
7. Faculty of Education ..	225	59	284
8. Faculty of Engineering ..	444	—	444
9. Faculty of Law ..	989	10	999
Total ..	15,248	1,977	17,225

**STATEMENT SHOWING THE NUMBER OF CANDIDATES APPEARED
AND PASSED AT THE UNIVERSITY EXAMINATIONS
HELD IN APRIL & SEPTEMBER 1957.**

<i>Name of the Examination</i>		<i>No. of candidates appeared.</i>			<i>No. of candidates passed.</i>		
		Male	Female	Total	Male	Female	Total
Inter. (Arts)		1957.					
	April ..	1,640	345	1,985	437	170	607
	Sept. ..	954	163	1,117	170	21	191
„ Science.							
	April ..	2,628	387	3,015	1,054	195	1,249
	Sept. ..	687	130	817	262	31	293
PUC. (Humanities).							
	April ..	1,448	295	1,743	637	179	816
	Sept. ..	476	72	548	199	38	237

Name of the Examination		No. of candidates appeared.			No. of candidates passed.		
		Male	Female	Total	Male	Female	Total
PUC. (Sciences).							
	April 1957	2,606	348	2,954	981	263	1,244
	Sept. „	485	34	519	163	12	175
Inter. (Commerce).							
	April „	358	—	358	131	—	131
	Sept. „	204	—	204	66	—	66
B.A.							
	April „	1,147	194	1,341	473	95	568
	Sept. „	863	136	999	278	51	329
B.Sc.							
	April „	684	113	797	249	82	331
	Sept. „	361	33	394	134	18	152
B.Com.							
	April „	486	2	488	145	1	146
	Sept. „	349	—	349	86	—	86
B. Chem. Tech.							
	April „	5	—	5	4	—	4
LL.B. (Previous)							
	April „	578	6	584	183	2	185
	Sept. „	197	2	199	69	1	70
LL.B. (Final)							
	April „	394	5	399	141	3	144
	Sept. „	192	—	192	95	—	95
LL.M. (Previous)							
	April „	22	1	23	3	1	4
	Sept. „	—	—	—	—	—	—
LL.M. (Final)							
	April „	4	1	5	1	—	1
	Sept. „	—	—	—	—	—	—
M.B.B.S. I							
	April „	110	32	142	59	29	88
	Sept. „	137	24	161	70	11	81
do. II							
	April „	1	—	1	—	—	—
	Sept. „	1	—	1	1	—	1
do. III							
	April „	51	23	74	30	17	47
	Sept. „	47	11	58	25	10	35
do. IV							
	April „	58	27	85	31	11	42
	Sept. „	47	18	65	29	17	46
B.E. I							
	April „	211	—	211	107	—	107
	Sept. „	56	—	56	30	—	30
3.E. II (Civil)							
	April „	114	—	114	86	—	86
	Sept. „	12	—	12	6	—	6
do. (Elect.)							
	April „	24	—	24	14	—	14
	Sept. „	4	—	4	2	—	2
do. (Mech.)							
	April „	21	—	21	17	—	17
	Sept. „	3	—	3	3	—	3

Name of the Examination				No. of candidates appeared.			No. of candidates passed.		
				Male	Female	Total	Male	Female	Total
B.E. III (Civil)	April	1957		84	—	84	39	—	39
	Sept.	"		25	—	25	14	—	14
do. (Elect.)	April	"		16	—	16	7	—	7
	Sept.	"		4	—	4	2	—	2
do. (Mech.)	April	"		13	—	13	5	—	5
	Sept.	"		2	—	2	1	—	1
B.V.Sc. I	April	"		55	—	55	39	—	39
	Sept.	"		15	—	15	15	—	15
do. II	April	"		131	—	131	53	—	53
	Sept.	"		59	—	59	57	—	57
do. III	April	"		116	—	116	55	—	55
	Sept.	"		62	—	62	48	—	48
do. IV	April	"		33	—	33	30	—	30
	Sept.	"		4	—	4	3	—	3
B.Sc. (Agri.) I	April	"		73	6	79	44	3	47
	Sept.	"		26	3	29	22	3	25
do. II	April	"		36	—	36	28	—	28
	Sept.	"		5	—	5	5	—	5
do. III	April	"		31	—	31	25	—	25
	Sept.	"		6	—	6	6	—	6
B.Ed.	April	"		221	45	266	169	38	207
	Sept.	"		44	5	49	24	5	29
M.Ed.	April	1957 only		18	4	22	16	3	19
D.G.O.	April	1957		—	4	4	—	—	—
	Sept.	"		—	3	3	—	2	2
D.O. (Part II)	April	"		2	—	2	2	—	2
	Sept.	"		4	—	4	3	—	3
Dip. in French	April	1957 only		5	2	7	4	1	5
do. German	do.	do.		11	—	11	5	—	5
Cert. in Pub. Admn.	do.			8	—	8	8	—	8
do. Journalism	do.			1	—	1	1	—	1
Dip. in Journalism	do.			11	3	14	9	2	11
Entrance Exams.	do.			103	16	119	77	15	92
Dip. O.L.	do.			30	—	30	23	—	23
B.O.L.	do.			12	—	12	9	—	9
M.A.	do.			91	32	123	85	30	115
M.Com.	do.			13	1	14	10	1	11
M.Sc.	do.			44	15	59	43	15	58

LIBRARY, LABORATORIES, ETC.

Total volumes in the library—1,08,250 (excluding Manuscripts.)

English books	..	31,744
Urdu, Persian and Arabic	..	15,986
Oriental	..	14,803
Gift	..	15,253
Salar Jung	..	30,464
Manuscripts	..	3,304
Palm-Leaf	..	1,244

Grand Total	..	1,12,798
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Besides the University Library, every College has its own Library and there are Seminar Libraries attached to each Department of study.

The University has well-equipped Physical, Chemical and Geological Laboratories, besides a well-equipped Chemical Technology Laboratory, Zoological Museum and Botanical Garden.

In connection with the Government of India scholarships for student from South and South East Asian Countries for studies in India under the Technical Co-operation Scheme, the following number of seats have been reserved for such students:—

University College of Engineering :

1. Civil Engineering	..	1
2. Mechanical Engineering	..	1
3. Electrical Engineering	..	1

University College of Science :

1. B. Chem. Technology	..	2
2. B. Chem. Engineering	..	1

M.Sc. (previous) Class :

1. Physics	..	1
2. Botany	..	1
3. Zoology	..	1

Post M.Sc. Research :

Physics	..	1
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SCHOLARSHIPS AND MEDALS

The following shall be the allocation of scholarships :—

Faculty of Agriculture :

B.Sc. (Agri.)		4 scholarships of Rs. 20.00 per mensem
1st Year	..	each, tenable for 10 months awarded to the best students in the order of merit in the Pre-Professional examination.
2nd Year	..	4 scholarships of Rs. 20.00 per mensem each, tenable for 10 months awarded to the best students in the order of merit in the B.Sc. Agri. 1st Year examination.
3rd Year	..	4 scholarships of Rs. 25.00 per mensem each, tenable for 10 months awarded to the best students in the order of merit in the B.Sc. Agri. 2nd Year examination.

Faculty of Arts :

B.A. 3-Yr. Course		20 scholarships of Rs. 20.00 per mensem
(for the first 2 years) ..		each, tenable for 20 months awarded to the best students in the order of merit in the Pre-University (Humanities) course examination.
(for the 3rd Year) ..		20 scholarships of Rs. 20.00 per mensem each, tenable for 10 months awarded to the best students in the order of merit in the B.A. 2nd Year examination.
M.A. (Previous)	..	19 scholarships of Rs. 25.00 per mensem each, tenable for 10 months awarded to the best students in the B.A. examination as follows:—
		3 scholarships irrespective of subject, to the best students in order of merit;
		16 scholarships to the best students who get First Division and secure the highest marks in the subject.

- M.A. (Final) .. 19 scholarships of Rs. 25.00 per mensem each, tenable for 10 months awarded to the best students in the order of merit in the M.A. (Previous) examination as follows:—
 3 scholarships irrespective of subject, to the best students in order of merit;
 16 scholarships to the best students who get First Division and secure the highest marks in the subject.

Faculty of Commerce :

- B.Com. 3-Yr. Course (for the first 2 years) .. 6 scholarships of Rs. 20.00 per mensem each, tenable for 20 months awarded to the best students in the order of merit in the Pre-University course (Humanities) examination.
- For the 3rd Year .. 6 scholarships of Rs. 20.00 per mensem each, tenable for 10 months awarded to the best students in the order of merit in the B.Com. 2nd Year examination.
- M. Com. (Previous) .. 1 scholarship of Rs. 25.00 per mensem tenable for 10 months awarded to the best student in the order of merit in the B.Com. examination.
- M.Com. (Final) .. 1 scholarship of Rs. 25.00 per mensem tenable for 10 months awarded to the best student in the order of merit in the M.Com. (Previous) examination.

Faculty of Engineering :

- B.E. 1st Year .. 4 scholarships of Rs. 20.00 per mensem each, tenable for 10 months awarded to the best students in the order of merit in the Pre-Professional examination.
- B.E. 2nd Year .. 4 scholarships of Rs. 20.00 per mensem each, tenable for 10 months awarded to the best students in the order of merit in the B.E. 1st Year examination.

- B.E. 3rd Year** .. 1 scholarship of Rs. 25.00 per mensem tenable for 10 months awarded to the candidate obtaining the highest marks in the B.E. II year examination.
- 3 scholarships of Rs. 25.00 per mensem each, tenable for 10 months awarded to the best students in the order of merit in the B.E. II year examination for the study of Civil, Mechanical and Electrical Engineering.

Faculty of Medicine :

- M.B., B.S.**
- 1st Year** .. 4 scholarships of Rs. 20.00 per mensem each, tenable for 10 months awarded to the best students in the order of merit in the Pre-Professional examination.
- 2nd Year** .. 4 scholarships of Rs. 20.00 per mensem each, tenable for 10 months awarded to the best students in the order of merit in the M.B., B.S. 1st year examination.
- 3rd Year** .. 4 scholarships of Rs. 25.00 per mensem each, tenable for 10 months awarded to the best students in the order of merit in the M.B., B.S. 2nd Year examination.
- 4th Year** .. 4 scholarships of Rs. 25.00 per mensem each, tenable for 10 months awarded to the best students in the order of merit in the M.B., B.S. 3rd Year examination.
- 5th Year** .. 4 scholarships of Rs. 25.00 per mensem each, tenable for 10 months awarded to the best students in the order of merit in the M.B., B.S. 4th Year examination.

Faculty of Religion & Culture :

- B.A. 3-Yr. Course** 1 scholarship of Rs. 20.00 per mensem
(for the first 2 years) .. tenable for 20 months awarded to the best student in the order of merit in the Pre-University (Humanities) course examination.

- (for the 3rd Year) .. 1 scholarship of Rs. 20.00 per mensem tenable for 10 months awarded to the best student in the order of merit in the B.A. 2nd Year examination.
- M.A. (Previous) .. 1 scholarship of Rs. 25.00 per mensem tenable for 10 months awarded to the best student in the order of merit in the B.A. (Religion & Culture) examination.
- M.A. (Final) .. 1 scholarship of Rs. 25.00 per mensem tenable for 10 months awarded to the best student in the order of merit in the M.A. (Previous) (Religion and Culture) examination.

Faculty of Science :

- Pre-Professional Course (Engineering & Technology) .. 10 scholarships of Rs. 15.00 per mensem each, tenable for 10 months awarded to the best students in the order of merit in the Pre-University course (Science) examination.
- Pre-Professional Course (Medicine, Agriculture, Veterinary Science) .. 10 scholarships of Rs. 15.00 per mensem each, tenable for 10 months awarded to the best students in the order of merit in the Pre-University course (Science) examination.
- B.Sc. 3-Yr. Course (for the first 2 years) .. 20 scholarships of Rs. 20.00 per mensem each, tenable for 20 months awarded to the best students in the order of merit in the Pre-University course (Science) examination.
- (for the 3rd year) .. 20 scholarships of Rs. 20.00 per mensem each, tenable for 10 months awarded to the best students in the order of merit in the B.Sc. 2nd Year examination.
- M.Sc. (Previous) .. 9 scholarships of Rs. 25.00 per mensem each, tenable for 20 months awarded to the best students in the B.Sc. examination as follows:—
3 scholarships to the best students irrespective of subject in the order of merit;

6 scholarships to the best students who get First Class in the subject and secure the highest marks in the subject.

M.Sc. (Final)	..	9 scholarships of Rs. 25.00 per mensem each, tenable for 10 months awarded to the best students in the order of merit in the M.Sc. (Previous) examination as follows:— 3 scholarships to the best students irrespective of subject in the order of merit; 6 scholarships to the best students who get First Class in the subject and secure the highest marks in the subject.
B.Chem. Tech. & B.Che. Engg. 1st Year	..	1 scholarship of Rs. 20.00 per mensem tenable for 10 months awarded to the best student in the qualifying examination for admission to the 1st year.
2nd Year	..	1 scholarship of Rs. 20.00 per mensem tenable for 10 months awarded to the best student in the order of merit in the 1st year University examination.
3rd Year	..	1 scholarship of Rs. 20.00 per mensem tenable for 10 months awarded to the best student in the order of merit in the 2nd Year examination.
4th Year	..	1 scholarship of Rs. 20.00 per mensem tenable for 10 months awarded to the best student in the order of merit in the 3rd year examination.

Faculty of Veterinary Science :

B.V.Sc. 1st Year	..	4 scholarships of Rs. 20.00 per mensem each, tenable for 10 months awarded to the best students in the order of merit in the Pre-Professional examination.
2nd Year	..	4 scholarships of Rs. 20.00 per mensem each, tenable for 10 months awarded to the best students in the order of merit in the 1st Year examination.

3rd Year	..	4 scholarships of Rs. 25.00 per mensem each, tenable for 10 months awarded to the best students in the order of merit in the 2nd Year examination.
4th Year	..	4 scholarships of Rs. 25.00 per mensem each, tenable for 10 months awarded to the best students in the order of merit in the 3rd Year examination.

Faculty of Law & Education :

Nil.

SPECIAL ENDOWED SCHOLARSHIPS

Taimuri Endowed Scholarship :

One scholarship of Rs. 25.00 per mensem tenable for one to four years to the student belonging to the ex-Royal family of Delhi, or failing that, at the discretion of the Vice-Chancellor, to any Muslim student (man or woman).

V. D. Hardikar Memorial Scholarship :

One scholarship of Rs. 9.00 per mensem tenable for 10 months to be awarded to a student of the Third Year Civil Engineering class who stands first in the B.E. Second Year examination.

C. BURSARIES & FREESHIPS

1. Bursaries and Freeships shall be awarded on the recommendation of a Committee consisting of the Principal of the College as Chairman and three other members nominated by the Vice-Chancellor after consulting the Principal.

2. Applications for Bursaries and Freeships shall be submitted to the Principal not later than one month after the last date for admission to the College. No application shall be entertained under any circumstances after that date.

3. The application shall be in the prescribed form and shall be countersigned by a gazetted officer or a responsible non-official of the city, town or village to which the applicant belongs, who shall certify that from his personal knowledge or after due ascertainment, the facts stated in the application are correct.

4. As soon as practicable after the last date fixed for the receipt of applications, the Committee shall consider all the applications and may, when necessary, call the applicants for interview. A report of the awards made shall, together with the names of the students awarded, be sent to the Vice-Chancellor.

5. Decisions regarding the award of Bursaries and Freeships shall be announced not later than two months after the commencement of the first term of the academic year.

6. Bursaries and Freeships shall be tenable only for the ten months of the academic year for which they are granted.

7. The Principal may reduce or cancel the award of a Bursary or Freeship to any student if.

- (i) he leaves the college during the academic year.
- (ii) he is absent without leave consecutively for one month.
- (iii) his progress in any subject is reported to be unsatisfactory by the Head of the Department.
- (iv) he is guilty of serious breach of the rules and regulations of the University or College.
- (v) it is found that the student has made false statement in his application regarding his academic qualifications or his financial conditions, or
- (vi) he fails in the Junior House examination for any reason whatsoever.

8. The Principal may cancel the award of a Bursary or Freeship to any student without assigning any reason.

9. In awarding Bursaries and Freeships preference shall be given to those who are not receiving Merit Scholarships or substantial financial assistance from some approved fund or public institution; provided that students receiving Merit Scholarships or other assistance may also be given Freeships but not Bursaries in deserving cases.

(i) *Bursaries.*

1. In the Pre-University course, Pre-Professional, B.A., B.Sc., B.Com., M.Com., M.A., M.Sc., B.Sc.Agr., M.B.B.S., B.V.Sc. and B.E. classes bursaries shall be given upto ten per cent of the total number of students in each class at the beginning of the first term.

2. Students who are in receipt of Bursaries shall also be exempted from payment of Tuition Fees.

3. The value of a Bursary in each of the following classes shall be as follows:—

Pre-University Course	— Rs. 5.00 per mensem tenable for 10 months.
Pre-Professional, B.A., B.Sc., B.Com.	— Rs. 8.00 „ „ „
M.A., M.Sc., M.Com., B.Sc. Agr., B.V.Sc., B.E., M.B.B.S.	— Rs. 12.00 „ „ „

4. Bursaries shall be granted only to those students who have passed the H.S.C. examination or any of the University examinations in the first or second division or who have secured not less than 40% in the aggregate in the examination.

5. Bursaries shall not be granted to those students who, having failed at a University examination, have passed subsequently in a Supplementary examination.

6. Bursaries shall be granted to students in the Senior classes only if they have passed the Junior House Examination and secured not less than 40% in the aggregate.

Freeships

1. In all classes in the University exemption from payment of Tuition Fees shall be granted upto 10 per cent of the total number of students (in addition to Bursary holders) in each class at the beginning of the first term.

2. Exemption from payment of Tuition Fees shall not ordinarily be granted to those who are in receipt of Merit Scholarships or those who are receiving substantial assistance from some other fund, and shall be granted only to those who produce satisfactory evidence of their poverty.

3. No student who has failed in a University examination or has passed it only under the compartment system or failed to secure at least 40 per cent in all subjects in the House examination shall be eligible for exemption from Tuition Fees.

MEDALS

Faculty of Arts:— B.A.

Sir Akbar Hydari Gold Medal awarded annually to the candidate who stands first in the B.A. examination and is placed in the first division.

Khan Bahadur Ahmed Alladin Gold Medal awarded annually to the woman candidate who passes the B.A. examination with the highest marks.

Moulvi Mohammed Murtaza Gold Medal awarded annually to the candidate who stands first in the B.A. (Islamic History) examination.

Faculty of Science:— B.Sc.

Sir Akbar Hydari Gold Medal awarded annually to the candidate who stands first in the B.Sc. examination.

Faculty of Medicine:— M.B.B.S.

Sir Akbar Hydari Gold Medal awarded annually to the candidate who stands first in the M.B.B.S. examination.

Lt. Col. Farhat Ali Gold Medal awarded annually to the successful candidate who stands first in Anatomy in the First M.B.B.S. examination.

Nawab Rustum Yar Jung Memorial Gold Medal awarded annually to the successful candidate who stands first in Surgery in the Final M.B.B.S. examination.

Miss Jarbanoo Parakh Gold Medal awarded every year to the successful candidate who stands first in Midwifery in the Final M.B.B.S. examination.

Kishanji Dhage Arastu Yar Jung Gold Medal awarded annually to the candidate who stands first in Medicine in the Final M.B.B.S. examination.

Faculty of Religion & Culture:— B.A.

Khan Bahadur Ahmed Alladin Gold Medal awarded annually to the candidate who stands first in the B.A. examination in Religion and Culture and is placed in the first division.

Faculty of Engineering:

Sir Akbar Hydari Gold Medal awarded annually to the candidate who stands first in the B.E. Second Year examination and is placed in the first division.

Roscoe Allen Gold Medal awarded annually to the candidate who passes the B.E. Second Year examination with the highest marks in the subject of 'Hydraulics'.

Nawab Karamat Jung Gold Medals, one for Civil Engineering and the other for Mechanical Engineering, awarded annually to the candidates who obtain not less than 60 per cent of marks in the aggregate in the B.E. Third Year examination in Civil or Mechanical Engineering within the minimum period of three years prescribed to pass the B.E. examination and stand first on the basis of their career in the University examination and the terminal examination of the Engineering College.

Faculty of Education:— B.Ed.

Sir Akbar Hydari Gold Medal awarded annually to the candidate who stands first in the B.Ed. examination.

Women Candidates:— Intermediate.

Khan Bahadur Ahmed Alladin Gold Medal awarded annually to the women candidate who passes the Intermediate examination with the highest marks.

PRIZES

(a) Moulvi Abdul Haq Prize (Cash) awarded annually to the student of the Aurangabad Intermediate College standing first in Urdu in the Intermediate examination who prosecutes further studies at the Osmania University.

(b) Mackenzie Memorial Prize (Books or Gold Medal) awarded annually to the student of Economics at the University presenting the best thesis embodying the results of economic enquiry into a particular village or industry.

TRANSITORY PROVISION

The following rules will be applicable for a period of *two years* from June 1957 to March 1958: for the award of *Merit Scholarships* for students passing Intermediate Examination and seeking admission to the 2-Year courses, viz., B.A. (pass), B.A. (Religion & Culture), B.Sc., B.Com.

- | | | |
|-----------------------------|----|--|
| B.A. (Pass) | .. | 20 scholarships of Rs. 20.00 per mensem each tenable for 20 months awarded to the best students in order of merit in the Intermediate (Arts) examination. |
| B.A. (Religion and Culture) | .. | 3 scholarships of Rs. 20.00 per mensem each tenable for 20 months awarded to the best students in order of merit in the Intermediate (Religion & Culture) examination. |
| B.Sc. | .. | 25 scholarships of Rs. 20.00 per mensem each tenable for 20 months awarded to the best students in order of merit in the Intermediate (Science) examination. |
| B.Com. | .. | 10 scholarships of Rs. 20.00 per mensem each tenable for 20 months awarded to the best students in order of merit in the I.Com. examination. |

Faculty of Commerce:

- | | | |
|-------------------|----|---|
| I.Com. | .. | 5 scholarships of Rs. 20.00 per mensem each tenable for 20 months awarded to the best students in order of merit in the H.S.C. examination. |
| B.Com. | .. | 10 scholarships of Rs. 25.00 per mensem each tenable for 20 months awarded to the best students in order of merit in the I.Com. examination. |
| M.Com (Previous). | .. | 1 scholarship of Rs. 30.00 per mensem tenable for 10 months awarded to the best student in order of merit in the B.Com. examination. |
| M.Com. (Final). | .. | 1 scholarship of Rs. 30.00 per mensem tenable for 10 months awarded to the best student in order of merit in the M.Com. (Previous) examination. |

DEPARTMENT OF PUBLICATION & UNIVERSITY PRESS

The Compilation & Translation Bureau was founded in 1917 for the compilation and translation of standard works in Urdu. The Bureau had produced 530 translations and compilations of which 396 have been printed and published. The number of technical terms so far compiled in Urdu is nearly one lakh.

The Bureau as such has now been reconstituted into a Department of Publication & University Press which has undertaken to sponsor Osmania University Publication Series for the benefit of the public and the University. This will be meeting a long-felt need of the Teaching Staff in helping them to publish their original works in diverse fields of study and research. This Series will basically and fundamentally relate to the studies in the Deccan history, culture, literature, art, archaeology, painting, etc. It will also be a comprehensive scheme of publication dealing with the research work in other field of studies.

The Department has, after its reorganisation, so far published the following books in Hindi :

1. Samanya Shabd Sangrah Bhasha Survey No. I.
2. do. do. No. II.
3. Hindi Terms of Sociology.
4. English Prefixes and Suffixes and their Hindi Equivalent.
5. A Concise English-Hindi Dictionary containing more than 12,000 terms relating to Social Science as well as general reference.

NIZAMIAH OBSERVATORY

The Nizamiah Observatory was established in 1908 and was transferred to the control of the Osmania University in 1919. The work of the Observatory may be divided into the following sections :—

1. *Astronomy* :

The principal astronomical equipment consists of two equatorial telescopes, an 8-inch photovisual and a 15-inch visual refractor ; a Hale Spectrohelioscope, a small transit instrument, a Blink Comparator, a photo-meter and some other auxiliary instruments.

Photographical Work :

Since its establishment, the Observatory has participated in the great international undertaking of Carte-du-Ciel and has completely measured the zones allotted to it, namely —17 degrees to —23 degrees and +36 degrees to +39 degrees. The results of these surveys have been published in a series of Astrographic Catalogues.

The Observatory is at present engaged in the determination of proper motions of stars in the zones +32 degrees and +33 degrees.

Plates are also taken by means of the 5-inch Ross Camera attached to the 8-inch photo-visual telescope for determining the positions of minor planets and comets.

It is proposed to utilize the 8-inch photo-visual telescope for determining the proper motions of stars in the zones -17 degrees to -23 degrees and $+36$ degrees to $+39$ degrees by securing repetition plates with an interval of over 40 years.

Visual Work :

The 15-inch visual refractor was formerly used systematically for observations of variable stars and occultations of stars by the moon. At present, in addition to this, the refractor is being used for micro-metrical measurements of double stars, the positions of comets and minor planets and physical observations of comets.

It is intended to construct a photo-electric photometer to be attached to the 15-inch refractor for doing photometrical work of stars.

Spectrohelioscopic Work .

Daily observations of the sun with the Hale Spectroheliograph are made on all days of favourable weather in $H\alpha$ light for observations of solar flares and for measurements of radial velocities of prominences and flocculi. The data are being sent for publication in the quarterly Bulletin of Solar Activity, Zurich.

Academic Work :

Lectures in practical astronomy for students of the B.A. classes of the Osmania University are being delivered every year.

Seismology :

The readings of the principal phases of the seismograms obtained by means of the two Milne-Shaw Seismographs are sent for publication in the monthly Seismological Bulletin of the Government of India. Coded messages relating to earthquakes of moderate and great intensities are sent to the Seismologist, Central Seismological Observatory, Shillong for ultimate transmission to the Director of the International Seismological Bureau, Strausburg and to the Chief of Seismology Division, U. S. Coast and Geodetic Survey, Washington, D.C.

Rainfall Organisation :

The Observatory is the controlling office of the rainfall organisation of the Hyderabad State. It compiles and publishes the rainfall data of 152 rain-gauge stations spread over the State.

Library :

The library contains about 10,000 publications of various astronomical observatories. It has 500 technical books on astronomy, mathematics, physics and allied subjects. Almost all the astronomical journals are

subscribed for. The University Grants Commission have kindly sanctioned Rs. 20,000 which will enable the Observatory to fill up the lacunae in the astronomical periodicals.

Publications :

The Annual reports of the Observatory are being published in the Monthly Notices of the Royal Astronomical Society, London. So far, 13 Astrographic Catalogues containing the rectangular measures of about 8 lakhs of stars and about 85 scientific papers have been published. The monthly rainfall statements and Annual Summary are also published every year.

RESEARCH

The University had a Research Institute to direct research in the various Departments of the University. But now the institution has been wound up and the various departments deal with research in their departments directly.

ASSOCIATIONS IN THE UNIVERSITY

The following are the Associations in the University :—

- | | |
|--------------------------|--------------------------------------|
| 1. Students' Union. | 10. Theology Association. |
| 2. History Association. | 11. Chemistry Association. |
| 3. Economic Association. | 12. Engineering Association. |
| 4. Law Society. | 13. Physics Association. |
| 5. Urdu Association | 14. Students' Co-operative Society. |
| 6. Kannada Association. | 15. English Literary Association. |
| 7. Telugu Association | 16. Persian Association. |
| 8. Marathi Association. | 17. Sanskrit Association, and |
| 9. Arabic Association. | 18. Students' Philosophical Society. |

EXTENSION WORK

A sum of Rs. 4,000 has been provided in the budget for Extension Lectures by distinguished European and Indian scholars. A number of Extension Lectures are also delivered by members of the staff of the University on scientific and literary subjects.

WOMEN'S EDUCATION

Women are admitted as private students to the Intermediate Arts and Science, B.A. and B.Sc. examinations in all subjects. There are two Women's Colleges in Hyderabad teaching up to the B.A. and B.Sc. For M.A. and M.Sc., women students have to join the University College of Arts and University College of Science.

Besides except two Intermediate Colleges all the Colleges of the University are co-educational.

PROVISION FOR SAFEGUARDING HEALTH, DISCIPLINE, ETC.

The University has a highly qualified Senior Medical Officer who visits the University twice a week. There is also a qualified Resident Medical Officer who lives on the campus. He also conducts periodical medical examination of students.

The Principals of Colleges are supreme in matters of discipline and have powers to rusticate or otherwise punish the students.

COURSES OF STUDY, EXAMINATIONS AND DEGREES

The University offers in the Faculties of Arts and Religion and Culture, the Degrees of B.A., M.A. and Ph.D., in the Faculty of Commerce, B.Com. and M.Com., in the Faculty of Science, Degrees of B.Sc., M.Sc. and Ph.D., in the Faculty of Law, the Degrees of LL.B. and LL.M., in the Faculty of Education, the Degrees of B.Ed. and M.Ed., in the Faculty of Engineering, the Degrees of B.E., in the Faculty of Medicine, the Degrees of M.B., B.S., M.D., M.S., in the Faculty of Agriculture, B.Sc. Ag., and in the Faculty of Veterinary Science, the Degree of B.V.Sc.

Special provision is made for the following classes of persons for admission to the Intermediate and B.A. examinations of the University as private candidates:—

1. Inspecting Officers of the State Education Department and whole-time teachers of two years' standing employed in an educational institution;
2. Lab. Assistants in an educational institution;
3. Women.
4. Indian Army, Navy and Air personnel actually engaged in teaching and stationed in Hyderabad.
5. Librarians.

THE PRE-UNIVERSITY COURSE

The Intermediate Course has been replaced by the Pre-University Course which extends over a year after Matriculation. The subjects for study at the examinations are (1) English (Compulsory), (2) Regional or allied Classical Languages (Kannada, Telugu, Marathi, Urdu, Hindi, Tamil, Sanskrit, Arabic or Persian (one paper), (3) Social Studies and General Science, (4) Combinations of Subjects on Humanities.

Combinations under Humanities :

1. History and Economics.
2. Civics and History.
3. History and Modern Language.
4. History and Logic.

5. Civics and Economics.
6. Civics and Modern Language.
7. Economics and Geography.
8. Modern Language and Classical Language.
9. Mathematics and Logic.
10. Mathematics and Economics.
11. Commerce and Geography.
12. Commerce and Economics.
13. Commerce and Mathematics.
14. History and Geography.
15. History and Classical Language.
16. Civics and Geography.
17. Civics and Logic.
18. Psychology and Civics.
19. Psychology and Economics.

Combinations under Science :

1. Mathematics and Physical Sciences.
2. Physical Sciences and Biological Sciences.

B.A. (2 YEAR DEGREE COURSE)

The Course of study extends over two years after the Intermediate Examination of this University or an examination accepted as equivalent thereto. The subjects of study for the examination are : (1) English (2 papers) ; (2) Regional or allied classical language (Kannada, Telugu, Marathi, Urdu, Hindi, Tamil, Sanskrit, Arabic or Persian) (1 paper) ; (3) Any one of the following groups of one Main of four papers and two Subsidiaries of two papers each, and in Geography Main 3 theory papers and 1 practical and in Geography theory 2 theory papers and 1 practical.

Combinations for B.A. (2 Years Course) :

<i>Main</i>	<i>Subsidiary</i>	<i>Subsidiary</i>
1. History	Economics	Sociology
2. History	Economics	Political Science
3. History	Economics	Geography
4. History	Philosophy	Classical Language
5. History	Philosophy	Political Science
6. Economics	History	Political Science
7. Economics	Political Science	Modern Language
8. Economics	Sociology	Modern Language
9. Economics	History	Sociology
10. Economics	History	Geography
11. Mathematics	Statistics	Applied Mathematics
12. Mathematics	Astronomy	Applied Mathematics

<i>Main</i>	<i>Subsidiary</i>	<i>Subsidiary</i>
13. Mathematics	Economics	Applied Mathematics
14. Philosophy	History	Political Science
15. Philosophy	Modern Language	Classical Language
16. Philosophy	Psychology	Political Science
17. Political Science	History	Economics
18. Political Science	Philosophy	History
19. Political Science	Economics	Modern Language
20. Modern Language	Economics	Sociology
21. Modern Language	Philosophy	Classical Language
22. Modern Language	Economics	Geography
23. Modern Language	Economics	Political Science
24. Modern Language	Philosophy	Political Science
25. Classical Language	Philosophy	Modern Language
26. Classical Language	Philosophy	History
27. Classical Language	History	Economics
28. Sociology	History	Economics
29. Sociology	Modern Language	Economics
30. Sociology	Philosophy	History
31. Economics	Sociology	Geography
32. Economics	Modern Language	Geography
33. Sociology	Modern Language	Geography
34. Classical Language	Economics	Modern Language
35. Political Science	History	Geography
36. Political Science	Economics	Sociology
37. Classical Language	Political Science	Modern Language
38. Classical Language	History	Modern Language
39. Modern Language	History	Economics
40. Geography	History	Economics
41. Geography	Economics	Sociology
42. Geography	Political Science	Modern Language
43. Modern Language	Economics	Classical Language
44. Psychology	Philosophy	Political Science
45. Psychology	Philosophy	Classical Language
46. Psychology	Philosophy	Modern Language
47. Psychology	History	Economics
48. Psychology	Geography	Modern Language
49. Psychology	Geography	Sociology

B.A. (3 YEAR DEGREE COURSE)

The 3 year Degree Course of study extends over 3 years after P.U.C. examination of this University or on examination accepted as equivalent thereto. The Course of Studies for the B.A. examination shall consist of the following subjects:

(a) English

(b) Regional or Allied Classical Language

(c) General Education

(d) One group from, among the following combinations of three Optional subjects of equal standard.

<i>Main</i>	<i>Subsidiary</i>	<i>Subsidiary</i>
1. Modern Language	Classical Language	Economics
2. Modern Language	History	Economics
3. Modern Language	History	Classical Language
4. Modern Language	History	Political Science
5. Modern Language	Economics	Political Science
6. Modern Language	Economics	Sociology
7. Modern Language	Economics	Geography
8. Modern Language	Political Science	Classical Language
9. Modern Language	Philosophy	Classical Language
10. Modern Language	Political Science	Geography
11. Modern Language	Philosophy	Political Science
12. Modern Language	Sociology	Geography
13. Economics	History	Sociology
14. Economics	History	Political Science
15. Economics	History	Geography
16. Economics	Sociology	Geography
17. Economics	Sociology	Political Science
18. Economics	Mathematics	Statistics.
19. Sociology	Philosophy	History
20. Philosophy	History	Political Science
21. Philosophy	History	Classical Language
22. Mathematics	Statistics	Applied Mathematics
23. Mathematics	Statistics	Sociology
24. Economics	Political Science	Public Administration
25. History	Political Science	Public Administration
26. Political Science	Geography	Economics
27. Mathematics	Applied Mathematics	Economics

Award of Division :

(a) The results will be announced for each subject separately. The marks obtained by the candidate in one subject will not affect his results in the other subjects.

(b) Results will be declared only in English, Regional and Allied Classical language, and General Education as far as the examination at the end of II Year is concerned.

(c) A candidate shall be declared to have passed the examination if he has passed in all subjects in one or more attempts securing not less than 35 per cent marks in each subject.

(d) A candidate shall be declared to have passed in II Division, provided he passes in all subjects within four years of the date of the

admission to the course and has secured not less than 48 per cent, but less than 60 per cent marks in the aggregate.

(e) A candidate shall be declared to have passed in I Division, provided he passes in all subjects within four years of the date of admission to the Course and has secured not less than 60 per cent marks in the aggregate.

The result in the Optional subjects will be declared only after the examination at the end of III Year.

Candidates obtaining—

60 per cent and above are placed in the First Division.	}	Of the aggregate marks in the optional subjects.
48 to 59 per cent are placed in the 2nd Division.		
36 per cent to 47 per cent are placed in the 3rd Division		

Divisions shall be declared only on the basis of the marks secured by the candidate in the Optional subjects and candidates securing 60 per cent and above marks in General English will be declared to have passed with distinction in English.

The results will be announced for each group separately. The marks obtained by a candidate in one group will not affect his results in other group or groups. For this purpose the examination will be divided into three groups as follows:—

1. English.
2. Regional or Allied Classical Language.
3. Optional Subjects.

MASTER OF ARTS (M.A.)

The course extends over two years subsequent to graduation and is open to graduates of this or of a recognised University. The examination consists of two parts. Previous and Final—held after each academic year. There are four papers in the Previous and four in the Final Examination.

A student's choice of subjects in the M.A. examination is restricted to one of the subjects he offered for the Bachelor's Degree. The subject for study and examination is one of the following:—

English; History; Philosophy; Economics; Geography; Political Science; Sociology; Mathematics; Urdu; Persian; Arabic; Sanskrit; Telugu; Marathi; Kannada; Hindi; Tamil; Religion and Culture.

Minimum pass marks in the aggregate 40 per cent.

Results will be announced on the following basis :—

First Division 60 per cent and above.	| of the aggregate marks of the combined results of the Previous and Final examinations.
Second Division 50 per cent to 59 per cent.	
Third Division 40 per cent to 49 per cent.	

DOCTOR OF PHILOSOPHY (Ph.D.)

The course extends over two years and is open to the candidates who have passed the M.A. Examination of this or any other recognised University in the First or Second Class. The candidates are required to submit a thesis based on original research and to undergo a *viva voce* and written examination, if necessary.

SCIENCE

BACHELOR OF SCIENCE (B.Sc.)

The course of study extends over two years after the Intermediate (Science) examination of this University or an examination accepted as equivalent thereto. The subjects for examination are as follows: (1) English (2 papers); (2) Regional or allied classical language (as in B.A.) (one paper); (3) One of the following groups of One Main subject of 3 theory papers and two practicals and two Subsidiary subjects of two theory papers and one practical for each. There will be no practical examination in Mathematics.

COMBINATIONS FOR B.Sc. (2 YEARS COURSE)

<i>Main</i>	<i>Subsidiary</i>	<i>Subsidiary</i>	
1. Chemistry	Physics	Mathematics	
2. Chemistry	Botany	Zoology	
3. Physics	Chemistry	Mathematics	.
4. Physics	Geology	Mathematics	.
5. Geology	Physics	Mathematics	. (open to M.P.C. only)
6. Botany	Chemistry	Zoology	
7. Botany	Chemistry	Geology	(open to B.P.C. only)
8. Zoology	Chemistry	Botany	
9. Zoology	Botany	Geology	
10. Mathematics	Physics	Chemistry	
11. Botany	Zoology	Geology	
12. Geology	Chemistry	Botany	(open to B.P.C. only)
13. Geology	Physics	Mathematics	. (open to M.P.C. only)
14. Geology	Physics	Chemistry	(open to M.P.C. only)
15. Geology	Botany	Zoology	

Pass Marks :

Minimum pass marks in each subject 36 per cent.

(N.B.—For the main subject in B.Sc. a minimum of 33 per cent in Theory and 33 per cent in Practical shall be necessary.)

Scheme of examination and Divisions for the B.Sc. are the same as for B.A.

BACHELOR OF SCIENCE (B.Sc.) (3 YEAR DEGREE COURSE)

The B.Sc. (3 year degree course) extends over a period of 3 years after the Pre-University examination of this University or an examination recognised as equivalent thereto.

The curriculum for the B.Sc. Degree course shall consist of the following subjects :

- | | |
|---|---------------------------------|
| (a) English. | } for the first two years only. |
| (b) Regional or Allied Classical Language. | |
| (c) General Education. | |
| (d) One group from among the following combinations of three optional subjects of equal standard. | |

1. Mathematics	Physics	Chemistry
2. Mathematics	Physics	Astronomy
3. Mathematics	Applied Mathematics	Astronomy
4. Mathematics	Physics	Geology
5. Botany	Zoology	Chemistry
6. Botany	Zoology	Geology
7. Botany	Geology	Chemistry
8. Mathematics	Physics	Geology
9. Zoology	Geology	Chemistry
10. Botany	Chemistry	Geology

There shall be a University examination at the end of II Year in the following subjects: (1) English, (2) Regional or Allied Classical Language, (3) General Education, (4) Each Optional (one paper), and a Final University examination at the end of the III year consisting of two Theory papers in each Optional subject in addition to Practical examination wherever necessary.

THE PRE-PROFESSIONAL COURSE

The Pre-Professional Course extends over a period of one year after the Pre-University Science examination or an examination recognised as equivalent thereto.

(i) The curriculum for the Pre-Professional Course for Engineering and Technology shall consist of the following subjects :

- (a) English, (b) Physics, (c) Chemistry, (d) Mathematics, and (e) Drawing.

(ii) The curriculum for the Pre-Professional Course for Medicine, Agriculture and Veterinary Science shall consist of the following subjects :

- (a) English, (b) Physics, (c) Chemistry, (d) Botany, and (e) Zoology.

B.COM. (3 YEAR DEGREE COURSE)

The B.Com. (3 Year Degree Course) extends over a period of 3 years after the Pre-University examination.

The curriculum for the B.Com. Degree course shall consist of the following subjects :

- | | | |
|--|---|----------------------------------|
| (a) English. | } | for the first
two years only. |
| (b) Regional or Allied Classical Language. | | |
| (c) General Education. | | |
| (d) Commerce, 4 papers. | | |
| (e) Commerce, 5 papers (at the end of 3rd year). | | |

Award of Division :

(i) A candidate shall be declared to have passed the examination, if he passes in all subjects in one or more attempts securing not less than 35 per cent marks in each subject.

(ii) A candidate shall be declared to have passed in II Division, provided he passes in all subjects within four years of the date of admission to the Course and has secured not less than 48 per cent, but less than 60 per cent, marks in the aggregate.

(iii) A candidate shall be declared to have passed in I Division, provided he passes in all subjects within four years of the date of admission to the Course and has secured not less than 60 per cent marks in the aggregate.

MASTER OF SCIENCE (M.Sc.)

The course extends over two years and is open to graduates in Science of this or of a recognised University. A student's choice of subjects in the M.Sc. examination is restricted to one of the subjects he offered for the Bachelor's degree. There will be two examinations—the Previous and the Final—after each academic year. There will be three theory papers and two practicals in the Previous as well as in the Final examination. The subject of study and examination is one of the following :

Physics, Chemistry, Botany, Zoology, Geology, Mathematics.
Percentage for passes, etc., is the same as in the M.A.
Minimum pass marks in the aggregate of marks of:—

	Per cent
Theory papers	.. 36
Practical papers	.. 36
Theory and Practical papers	.. 40

**BACHELOR OF CHEMICAL TECHNOLOGY (B.Chem. Tech.) AND
BACHELOR OF CHEMICAL ENGINEERING (B.Chem. Eng.)**

The degree of Master of Science in Technology has been abolished and the technology course leading to the degree of either Bachelor of Chemical Technology (B.Chem.Tech.) or Bachelor of Chemical Engineering (B.Chem. Engineering) has been instituted. The course shall

have the duration of 4 successive academic years. It shall be open to candidates who have passed the Intermediate examination in Science of the Osmania University or any examination recognised by the Osmania University as equivalent thereto with Physics, Chemistry and Mathematics.

SCHEME OF EXAMINATION

I Year—

The First Year examination shall consist of six theory and two practical papers as follows:—

	No. of Hrs.	Max. marks.
Theory—		
I—Humanities —English and Science and Civilization ..	3	100
II—Mathematics ..	3	100
III—Physics ..	3	100
IV—Inorganic and Physical Chemistry ..	3	100
V—Organic Chemistry ..	3	100
VI—Principles of Engineering Mechanics ..	3	100
Practicals—		
VII—Inorganic and Organic Chemistry ..	6	100
VIII—Physics ..	3	50
	Total	750

Note:—In each practical paper 30 marks will be reserved for class records. Records of Physics Practicals, Machine Drawing and Workshop Practice will be valued along with records in the 2nd year examination.

II Year—

	No. of Hrs.	Max. marks.
Theory—		
I—Humanities Industrial Economics and Chemical Engineering Economics ..	3	100
II—Mathematics ..	3	100
III—Physics ..	3	100
IV—Chemistry—Inorganic ..	3	100
V—Chemistry—Organic ..	3	100
VI—Chemistry—Physical ..	3	100
VII—Applied Mechanics and Strength of Materials ..	3	100
VIII—Electrical Engineering ..	3	100

	No. of Hrs.	Max. marks.
Practicals—		
IX—Physics	.. 3	50
X—Inorganic Chemistry	.. 6	66
XI—Physical Chemistry	.. 6	67
XII—Organic Analysis and Preparations	.. 6	67
XIII—Machine Drawing	.. 6	100
XIV—Workshop Practice	.. 6	100
	Total	1,250

*Note:—*In each practical paper 30 marks will be reserved for class records. The marks of class records in Physics Practicals, Machine Drawing and Workshop Practice will include the marks of records of the previous year.

III Year—

	No. of Hours	Max. marks.
Theory—		
I—Chemical Technology—Inorganic	.. 3	100
II—Chemical Technology—Organic	.. 3	100
III—Advanced Physical Chemistry and Industrial Stoichiometry	.. 3	100
IV—Introductory Chemical Engineering and Fuel—Part I	.. 3	100
V—Introductory Chemical Engineering—Part II (Unit-operations)	.. 3	100
VI—Heat Engines	.. 3	100
Practicals—		
VII—Technical Analysis—Inorganic	.. 6	100
VIII—Technical Analysis—Organic	.. 6	100
IX—Chemical Engineering and Fuels	.. 6	100
X—Design Drawing	.. 6	100
	Total	1,000

*Note:—*In each practical paper 30 marks will be reserved for class records.

IVth Year;

One of the following special subjects to be studied.

1. Oil Technology.

	No. of Hrs.	Max. marks.
Paper I Oil Technology Part I	.. 3	100
Paper II Oil Technology Part II	.. 3	100

	No. of Hrs.	Max. marks.
Paper III Oil Technology Part III ..	3	100
Paper IV Oil Technology Part IV ..	3	100
Paper V Oil Technology Home Paper ..	4 months	100
Practicals—		
VI—Viva Voce ..		100
VII—Oil Technology Part I ..	12	100
VIII—Oil Technology Part II ..	12	100
	Total	800
<hr/>		
2. <i>Ceramic Technology.</i>		
I Ceramic Technology Part I ..	3	100
II Ceramic Technology Part II ..	3	100
III Ceramic Technology Part III ..	3	100
IV Ceramic Technology Part IV ..	3	100
V Ceramic Technology Home Paper ..	4 months	100
Practicals—		
VI Viva Voce ..		100
VII Ceramic Technology Part I ..	12	100
VIII Ceramic Technology Part II ..	12	100
	Total	800
<hr/>		
3. <i>Chemical Engineering.</i>		
I Chemical Engineering Thermodynamics ..	3	100
II Advanced Chemical Engineering Part I ..	3	100
III „ „ Part II ..	3	100
IV Fuels, Refractory and Furnaces ..	3	100
V Home Paper and Design Drawing ..	4 months	100
Practicals—		
VI Viva Voce ..		100
VII Chemical Engineering Part I ..	12	100
VIII „ „ „ II ..	12	100
	Total	800
<hr/>		

Note :—In each practical paper 30 marks will be reserved for class records.

Pass Marks :**At the 1st & 2nd year examinations :**

Minimum Pass marks in each subject	36%
" " " in the aggregate	40%

At the 3rd & 4th year examinations :

Minimum Pass marks in each subject	40%
" " " in the aggregate	45%

Divisions :

First Division	..	} 60% or more. below 60% and not less than 45%. 70% and above.
Second Division	..	
Distinction in the subject	..	

DOCTOR OF PHILOSOPHY (Ph.D.)

The course extends over two years and is open to the candidates who have passed the M.Sc. examination of this or any other recognised University in the First or Second Class. The candidates are required to submit a thesis based on original research and undergo a *viva voce* and written examination, if necessary.

DIPLOMA IN GERMAN AND FRENCH

The University provides for the teaching of German and French languages, and awards a Diploma after a course of two years. The classes are held out of the University hours. They are open to students, as well as outsiders. The fee for the teaching of these languages is Rs. 6 per term.

The examination consists of two written and one oral examination.

In order to pass the examination, the candidates are required to secure 33 per cent of the full marks in the written as well as in the oral examination and classes are arranged on the same basis as at other University examination.

DIPLOMA IN PUBLIC ADMINISTRATION

The Diploma of Proficiency in Public Administration will be granted to those who have attended two years course provided by the University in the subject. The course shall be open to graduates in Arts, Science, Commerce or Law of this or any other recognised University.

The examination shall comprise six papers of 3 hours each, carrying 100 marks each.

Award of Division :

- (a) Candidates who obtain not less than 35% of the marks in each paper and 60% in the aggregate shall be declared to have passed in the I Division.

(b) Candidates who obtain not less than 35% of the marks in each paper and 50% in the aggregate shall be declared to have passed in the II Division.

(c) Candidates who obtain not less than 35% of the marks in each paper and 40% in the aggregate shall be declared to have passed in the III Division.

Besides, new courses for Diplomas in Italian and Russian Languages have been introduced recently.

CERTIFICATE AND DIPLOMA COURSES IN JOURNALISM

A new Department of Journalism was established in 1954-55. There are two different courses each of one year's duration :

- (1) The Certificate Course in Journalism, for which any Matriculate having one year's experience in a newspaper is eligible.
- (2) The Diploma Course in Journalism for which Graduates are eligible.

These courses shall consist of the following subjects:—

1. Introduction to Journalism; 2. News Reporting and Writing; 3. Constitution of India and Press Laws; 4. Writing for a Newspaper; 5. Current Affairs; 6. Social and Economic Problems of India; 7. The Graphic Arts; 8. Editing; 9. Feature and Article Writing; 10. Seminar in Journalism; 11. Internship in Journalism, and one of the following subjects :

- (a) Radio Journalism.
- (b) Business Management.
- (c) Advertising.

Scheme of examination for the Certificate Course :

The examination shall consist of four papers of 3 hours' duration carrying 100 marks each. 100 marks will be allowed to class records.

Pass marks :

Minimum pass marks in each paper	35%
Minimum pass marks in Class Records	40%

Candidates obtaining 60% and above of the aggregate marks shall be declared to have passed with distinction.

Scheme of examination for the Diploma Course :

The examination shall consist of six papers of 3 hours each, carrying 100 marks each.

200 marks will be allowed for Class Records.

Pass Marks :

Minimum pass marks in each paper	35%
Minimum pass marks in Class Records	35%

Divisions :

1st Division	—	60% in the aggregate of Class Records and papers.
2nd Division	—	50% in the aggregate of Class Records and papers.
3rd Division	—	40% in the aggregate of Class Records and papers.

COMMERCE

INTERMEDIATE COMMERCE (I.Com.)

The course extends over two years after Matriculation or its equivalent. The subjects for study for the examination are (1) English (3 papers), (2) Regional or allied classical language (Kannada, Telugu, Marathi, Urdu, Hindi, Tamil, Sanskrit, Arabic or Persian) (One paper), (3) Commerce (6 papers) as follows:—

- I. Elementary Economics.
- II. Economic and Commercial Geography with special reference to India.
- III. Elementary Book-keeping and Commercial Arithmetic.
- IV. Accountancy.
- V. General Commercial knowledge (including commercial correspondence), Business Methods and Office Organisation.
- VI. One of the following subjects:
 - (i) Shorthand and Typewriting.
 - (ii) Mathematics.
 - (iii) Elements of Civics and Indian Administration.

Scheme of examination and divisions are the same as for Inter. Arts.

BACHELOR OF COMMERCE (B.Com.)

The course extends over two academic years. All those students who have passed the I.Com., Intermediate Arts with Commerce or its equivalent examination of this University or an examination recognised as equivalent thereto are admitted to B.Com. Every candidate shall be required to pass in :

- (1) English (2 papers as in B.A.)
- (2) Regional or allied classical language (one paper as in B.A.)
- (3) Commerce (9 papers) as follows:—
 - (i) Precis-writing and Commercial Correspondence etc., and Market Reports.
 - (ii) Modern Economic Development of England, U.S.A., Russia and India.
 - (iii) Business Organisation.
 - (iv) Statistics.

- (v) Principles of Economics and Public Finance.
- (vi) Currency, Banking and International Trade.
- (vii) Mercantile Law.
- (viii) & (ix) Any one of the following subjects :—

- (a) Advanced Accountancy and Auditing.
- (b) Transport.
- (c) Advanced Banking.
- (d) Statistics.
- (e) Insurance.
- (f) Rural Economics and Co-operation.

N.B.—Each subject comprises two papers and students can choose Advanced Statistics only if they had Mathematics as one of the optionals in their I.Com. examination.

Scheme of examination, Pass Marks and the Divisions are the same as for the B.A. examination.

MASTER OF COMMERCE (M.Com.)

The course extends over two years subsequent to graduation in Commerce and is open to Commerce Graduates of this University or of a recognised University. The examination consists of two parts—Previous and Final—held after each academic year.

M.Com. (Previous) comprises four papers as follows :—

- (1) Corporation Finance.
- (2) Organization of Industries.
- (3) Organization of Markets.
- (4) Applied Statistics.

M.Com. (Final) one of the following groups containing four papers each :—

Group A—

- (i) International Banking and Foreign Exchange.
- (ii) International Trade and Fiscal Policy.
- (iii) Labour Economics.
- (iv) Labour Management.

Group B—

- (i) Advanced Company Accounts.
- (ii) Principles of Auditing and Practice.
- (iii) Income Tax Law and Accounts.
- (iv) Cost Accounting.

Divisions :

1st Division	..	30% in each paper and 60% of the total.	} of the combined results of Previous and Final examina- tions.
2nd Division	..	30% in each paper and 50% of the total.	
Pass	..	30% in each paper and 40% of the total.	

FACULTY OF RELIGION AND CULTURE

(At present there is provision for the study of only Islamic Religion and Culture.)

INTERMEDIATE EXAMINATION

The subjects of study and examination are:—

- (1) English (3 papers as in Arts).
- (2) Arabic (1 paper as in Arts).
- (3) Compulsory subjects (3 papers).
- (4) Optional subject (one of the following) :—
 - Sociology
 - History (Indian and Islamic)
 - Economics
 - Philosophy (2 papers as in Arts)
 - Civics.

The marks for a pass and classification of successful candidates are same as for the Intermediate Examination in Arts.

BACHELOR OF ARTS (RELIGION AND CULTURE)

The course of study extends over two years subsequent to passing the Intermediate Examination. The subjects for study and examination are :—

- (1) English (2 papers as in Arts Faculty).
- (2) Quran (one paper).
- (3) Arabic (2 papers as in Arts Faculty).
- (4) Theology (4 papers).
- (5) One optional subject: (Subsidiary).

One of the following—History, Economics, Philosophy, Political Science (2 papers as in Arts Faculty).

Minimum marks for a pass, etc., is the same as for B.A. in Arts.

MASTER OF ARTS (RELIGION AND CULTURE)

The course extends over two years after graduation. The examination consists of two parts—Previous and Final—held at the end of each academic year. There are four papers in the Previous examination and four in the Final.

Previous—

Paper I—History of Muslims Civilization.

Paper II—Islamic Jurisprudence.

Paper III—Reformist Movements in Islam.

Paper IV—Comparative Religion.

Final—*Paper I*—Special Topic Religion and Culture.*Paper II*—Islamic Mysticism.*Paper III*—Muslim Political Thought.*Paper IV*—Philosophy of Religion.

Minimum marks for pass, etc., are the same as for the M.A. examination in Arts.

DOCTOR OF PHILOSOPHY (RELIGION AND CULTURE) (Ph.D.)

The course extends over two years and is open to candidates who have passed the M.A. Examination of this or any other recognised University in the First or Second Division.

The candidates are required to submit a thesis based on original research and to undergo a *viva voce* and written examination, if necessary.

PROFESSIONAL COURSES OF STUDY AND EXAMINATIONS**LAW: BACHELOR OF LAWS (LL.B.)**

The course extends over two years subsequent to graduation. The examination is held in two parts—Previous and Final—at the end of each academic year. There are 6 papers in Previous and 6 in the Final examination.

The subjects of study in the first year are :—

- (1) Law of Contracts and Sale of Goods Act.
- (2) Law of Evidence and Forensic Science.
- (3) Criminal Law and Procedure.
- (4) Indian Constitutional Law and Fundamental Rights.
- (5) Torts and Easements.
- (6) Roman Law and English Legal History.

The subjects of study in the second year are :—

- (1) Hindu and Muslim Law. (2) Public International Law. (3) Transfer of Property and Tenancy Laws. (4) Civil Procedure and Limitations Act. (5) Jurisprudence. (6) Company Law and Partnership Act. (7) Principles of Equity Trusts and Specific Relief.

Results will be announced on the following basis.

Minimum pass marks in each paper.	40%
Minimum pass marks in aggregate	45%

First Division—65 per cent and above.	} of the aggregate marks obtained in Previous and Final Examinations.
Second Division—Below 65 per cent but not less than 45 per cent	

MASTER OF LAWS (LL.M.)

The course extends over two years subsequent to graduation in Law. The examination is in two parts—Previous and Final—held at the end of each academic year. There are four papers of 100 marks each in the

Previous and four papers of 100 marks each and thesis of 200 marks in lieu of the last two papers in the final examination. The subjects for study in the first year are as follows :—

- (1) Historical and Comparative Jurisprudence and Principles of Legislation.
- (2) Comparative Constitutional Laws.
- (3) One of the following :—
 - (i) Hindu Law (History of Dharmashastra and Jurisprudence).
 - (ii) Muslim Law, History and Jurisprudence.
- (4) One of the following :—
 - (i) Ownership and Possession.
 - (ii) Conflict of Laws.

The following are the subjects of study in the Final examination :

- (1) Social Institutions.
- (2) Administrative Law and Social Legislation.

Thesis :—A thesis of 200 marks on any subject studied in LL.B. or LL.M. (Previous) and approved by the Faculty.

Results are announced on the following basis :—

Minimum pass marks in each paper	40%
Minimum pass marks in thesis	50%
Minimum pass marks in aggregate	45%
First Division—65 per cent and above.	} of the aggregate of marks obtained in Previous and Final examinations.
Second Division—Below 65 per cent but not less than 45 per cent.	

EDUCATION

B.Ed.

The course extends over one year and is open to all graduates of this or of any other recognised University. The examination comprises 5 papers and a practical examination as follows :—

- (1) Principles of Education and Educational Psychology.
- (2) History of Education.
- (3) School Organisation and School Hygiene.
- (4) Methods of Teaching any two of the following subjects :
English ; History ; Mathematics ; Science ; Geography ; and other languages.
- (5) One of the following special subjects :—

Child Education ; Advanced Educational Psychology ; Modern Systems of Education ; Adult Education ; Basic Education.

Further, every candidate is required to give under proper supervision at least 30 lessons during the year. The scheme of examination is as follows :—

Theory—Five papers—100 marks each.

Practical—(1) Record of Teaching work—100 marks.

(2) Teaching of one lesson—100 marks.

Minimum pass marks in each paper	36%
Minimum pass marks in practical	40%
Minimum pass marks in aggregate of Theory papers	36%
Minimum pass marks in aggregate of practical papers	40%

Division will be awarded on the following basis:—

Theory

First Division ..	60 per cent and above.	} of the aggregate marks in Theory.
Second Division ..	Below 60 per cent but not less than 50 per cent	
Third Division ..	Below 50 per cent but not less than 36 per cent.	

Practical

First Division ..	65 per cent and above.	} of the aggregate marks in Practical.
Second Division ..	Below 65 per cent but not less than 55 per cent.	
Third Division ..	Below 55 per cent but not less than 40 per cent.	

M.Ed.

The course extends over one academic year and is open to Dip. in Edn., B.Ts. or B.Eds. of the Osmania or any other recognised University. The examination comprises 3 papers and Dissertation as follows:—

- (1) General Theory of Education and Educational Sociology.
- (2) Methodology of one of the following subjects :
English ; History and Civics ; Mathematics ; Geography ; Science ;
Urdu or other languages.
- (3) Special subject—One of the following :
 - (i) Educational Organisation and Administration.
 - (ii) Tests and Measurement in Education.
 - (iii) Advanced Educational Psychology.
 - (iv) History of Educational Ideas.
 - (v) Comparative Education.
 - (vi) Methods and organisation in Nursery Schools, Kindergartens and Montessori Schools.
 - (vii) Vocational and Educational Dissertation.—to be valued by two examiners: one External and the other Internal.

Results are announced on the following basis:—

Minimum pass marks in each paper	40%
Minimum pass marks in aggregate	40%
Minimum pass marks in Dissertation	40%

Divisions will be awarded on the following basis:—

First Division ..	60 per cent and above.	} of the aggregate marks.
Second Division ..	Below 60 per cent but not less than 50 per cent	
Third Division ..	Below 50 per cent but not less than 40 per cent.	

ENGINEERING

B.E.

The course extends over three years. Only candidates who have passed the Intermediate Examination of this or of a recognised University and who have taken Physics, Chemistry and Mathematics in that Examination are admitted to the Faculty. The examination consists of three parts held at the end of each academic year. The College provides for instruction in three branches of Engineering—Civil, Mechanical and Electrical. The examination prescribed for the B.E. Degree may be conducted as deemed necessary, by means of written papers, practical and oral tests, inspection of certified sessional work and Drawing and Laboratories and Workshops or by means of any combination of these methods. The subjects for examination will be as follows:—

B.E. Part I.—(Common to Civil, Mechanical and Electrical).

(1) Pure Mathematics, (2) Applied Mathematics, (3) Surveying, (4) Engineering Drawing, (5) Strength of Materials and Theory of Structures, (6) Elements of Civil Engineering, (7) Elements of Mechanical Engineering, (8) Elements of Electrical Engineering, (9) Workshop Practice.

B.E. Part II.—(Civil).

(1) Mathematics (Pure and Applied), (2) Strength of Materials and Theory of Structures, (3) Hydraulics, (4) Civil Engineering Design, (5) Surveying, (6) Irrigation, (7) Materials and Construction, (8) Geology, (9) Estimating.

B.E. Part II.—(Mechanical).

(1) Mathematics (Pure and Applied), (2) Strength of Materials and Theory of Structures, (3) Hydraulics, (4) Machine Design and Drawing, (5) Applied Thermodynamics, (6) Theory of Machines, (7) Electrical Machinery, (8) Workshop Technology and Practice.

B.E. Part II.—(Electrical).

(1) Mathematics (Pure and Applied), (2) Strength of Materials and Theory of Structures, (3) Hydraulics, (4) Electrical Measurements, (5) Applied Thermodynamics, (6) Machine Drawing and Design, (7) Electrical Machinery, (8) Workshop Technology and Practice.

B.E. Part III.—(Civil).

(1) Strength of Materials, (2) Theory of Structures, (3) Hydraulics, (4) R. C. C. Design and Drawing, (5) Water Supply and Sanitary Engineering, (6) Irrigation and Water Power, (7) Communications, (8) Architecture and Town Planning.

B.E. Part III.—(Mechanical).

(1) Strength of Materials, (2) Applied Thermodynamics, (3) Hydraulic Machinery, (4) Theory of Machines, (5) Metallurgy, (6) Electrical Power, (7) Metrology and Machine Tools, (8) Engineering Economics.

B.E. Part III.—(Electrical).

(1) Strength of Materials, (2) Applied Thermodynamics, (3) Hydraulic Machinery, (4) Electrical Machine Design, (5) Electrical Power I, (6) Electrical Power II, (7) Electrical Machinery, (8) Engineering Economics.

Minimum pass marks in each subject:—

Each paper	36%
Sessional work	36%
Practical work	36%
Aggregate marks of paper, Sessional work and Practical	50%

Divisions :

First Division	75 per cent and above.	} of the aggregate marks of the combined results of Parts I, II and III.
with honours.		
First Division	Below 75 per cent but not	
with Distinction ..	less than 65 per cent.	
Second Division ..	Below 65 per cent but not	
	less than 50 per cent.	

MEDICINE**M.B.B.S.**

The course extends over five years. Students who have passed the Intermediate Examination with Physics, Chemistry (Organic and Inorganic) and Biology (Botany and Zoology including elements of genetics) are eligible for admission to the course. They must have attained the age of 17 years at the time of admission or will attain that age during the first term of studies. The examination consists of four parts. The First M.B.B.S. Examination is held after a regular course of study extending every 6 terms and the others after every three terms of regular course of study. The subjects for the various examinations are as follows:—

First M.B.,B.S.

- (1) Anatomy, including Embryology.
- (2) Physiology, including Histology and Biochemistry.

Second M.B.,B.S.

- (1) *Materia Medica* and *Pharmacology* including *Practical Pharmacy*.

Third M.B.,B.S.

- (1) *Pathology* and *Bacteriology*.
 (2) *Forensic Medicine*.
 (3) *Social Medicine* and *Public Health*.

Fourth M.B.,B.S.

- (1) *Medicine*.
 (2) *Surgery*.
 (3) *Ophthalmology*.
 (4) *Midwifery* and *Gynaecology*.

For all examinations :—

Minimum pass marks in Theory	50%
Minimum pass marks in Practicals and Orals	50%
For Distinction* in a subject	75%
For Honours*	75%

of the aggregate of marks in each Part of the Examination.

AGRICULTURE

B.Sc. (Agr.)

The course extends over three academic years and is open to students who have passed the Intermediate Science Examination of this or of a recognised University with Biology, Chemistry and Physics or Geology, as their subjects. They must have attained the age of 17 years at the time of admission or will attain that age during the first term of the studies. The following are the subjects for various examinations as well as for Practicals :

Part I—(1) *Agronomy*, (2) *Agricultural Botany*, (3) *Agricultural Chemistry*, (4) *Animal Husbandry*, (5) *Agricultural Engineering*.

Part II—(1) *Agronomy*, (2) *Agricultural Botany*, (3) *Agricultural Chemistry*, (4) *Entomology*, (5) *Plant Pathology*, (6) *Agricultural Engineering*.

Part III—(1) *Agronomy*, (2) *Horticulture*, (3) *Animal Husbandry*, (4) *Rural Economics and Sociology*, (5) *Extension*.

Minimum pass in each Theory paper	33%
Minimum pass in each Practical paper	33%
Minimum pass in each Aggregate of Theory and Practical	40%

* For Distinction or Honours each part of the examination must be passed in the first attempt in the minimum prescribed time.

Divisions will be awarded on the following basis:—

First Division	60 per cent and above.	} of the aggregate marks of the com- bined results of Parts I, II and III.
Second Division	Below 60 per cent but not less than 50 per cent	
Third Division	Below 50 per cent but not less than 40 per cent	

VETERINARY SCIENCE

B V Sc

The course extends over four academic years and is open to candidates who have passed the Intermediate Examination of this or any recognised University with Biology, Chemistry and Physics. The examination consists of four parts held at the end of each academic year.

The following are the subjects for various examinations as well as for Practicals —

I Year

- (1) Animal Husbandry Part I
- (2) Anatomy Part I
- (3) Biochemistry

II Year

- (1) Animal Husbandry Part II
- (2) Anatomy Part II
- (3) Physiology and Biochemistry Part, I & II
- (4) Parasitology

III Year

- (1) Animal Husbandry Part III
- (2) Materia Medica and Pharmacology
- (3) Pathology, Bacteriology and Immunology

IV Year

- (1) Animal Husbandry Part IV
- (2) Surgery
- (3) Medicine and Meat Inspection

Minimum pass marks in each Theory Paper	50%
Minimum pass marks in Practical and Oral	50%
1st Division	65% and above.

EXAMINATION FEES

	Rs.
1. <i>Intermediate Arts and Commerce.</i>	
(a) Whole Examination	30
(b) Any part or parts	24
2. <i>Intermediate Science.</i>	
(a) Whole Examination	33
(b) Any part or parts	26
3. <i>B.A. and B.Com.</i>	
(a) Whole Examination	40
(b) Any part or parts	32
4. First appearance for Regional Languages for B.A., B.Sc. and B.Com. at the end of Third Year	5
and for subsequent appearance	5
5. <i>B.Sc.</i>	
(a) Whole Examination	45
(b) Any part or parts	36
(c) B.Chem. (Tech.), B.Chem. (Eng.) I & II year examinations	45
6. <i>M.A. (Previous and Final)</i>	38
7. <i>M.Sc. (Previous and Final)</i>	44
8. <i>LL.B. (Previous and Final)</i>	38
9. <i>LL.M. (Previous and Final)</i>	38
10. <i>B.E. (1st and 2nd)</i>	38
<i>B.E. (Third)</i>	50
11. <i>B.Sc. (Agr.) (1st and 2nd)</i>	38
<i>B.Sc. (Agr.) (Third)</i>	60
12. <i>B.V.Sc. (1st, 2nd and 3rd)</i>	38
<i>B.V.Sc. (4th)</i>	60
13. <i>M.B.B.S. (1st, 2nd and 3rd)</i>	38
<i>M.B.B.S. (4th)</i>	60
14. <i>B.Ed.</i>	50
15. <i>M.Ed.</i>	60
16. <i>Ph.D.</i>	125
17. Diploma in French, German, Hindi Certificate, Entrance, Dip. O.L., B.O.L., Certificate in Journalism Dip. in Journalism and other Diploma Examinations	25
18. Diploma in Public Administration	60
19. <i>Pre-Professional Course.</i>	
(a) Whole Examination	25
(b) Examination in part	15

PANJAB UNIVERSITY

INTRODUCTORY

With the partition of the Panjab, this University was established on 1st October, 1947, under Ordinance No. VII promulgated by His Excellency the Governor of the East Panjab. This Ordinance was subsequently replaced by the East Panjab University Act No. VII of 1947. At present its constitution is based on the East Panjab University Act VII of 1947 as amended by the East Panjab University (Amendment) Act LIV of 1948, Ordinance VII of 1949, Panjab University (Amendment) Ordinance No. IV of 1953, Ordinance No. 1 of 1955 and East Panjab University (Amendment) Act, 1956 and Panjab University (Amendment) Act 2 of 1957. Its jurisdiction extends over Panjab (India) and Himachal Pradesh. The University is a teaching, affiliating and examining body.

PURPOSES OF THE UNIVERSITY

The University is incorporated for the purposes, among others, of making provision for imparting education in Arts, Letters, Science and the learned professions and of furthering advancement of learning, the prosecution of original research, with power to appoint University Professors, Readers and Lecturers, to hold and manage educational endowments, to erect, equip and maintain University Colleges, Libraries Laboratories and museums, to make regulations relating to the residence and conduct of students and to do all such acts as tend to promote study and research.

CHARACTER OF THE UNIVERSITY

The University is open to all persons of either sex and of whatever race, creed or class, and the University cannot adopt or impose on any person any test whatsoever of religious belief or profession in order to entitle him to be admitted thereto as a teacher or student, or to hold any office therein, or to graduate thereat or to enjoy or exercise any privilege thereof except where such test is specially prescribed in respect of any particular benefaction accepted by the University, having been made a condition thereof by any testamentary or other instrument creating such benefaction.

CONSTITUTION

The University consists of the Chancellor, the Vice-Chancellor, the Senate, the Syndicate. The Governor of the Panjab, is the ex-officio Chancellor of the University. The Vice-Chancellor is appointed by the Chancellor, for a term of 3 years which term may be extended by the

Chancellor for such further periods not exceeding 3 years at a time, as he may deem fit. The Senate have the entire management of and superintendence over, the affairs, and property of the University in accordance with the Statutes, Rules and Regulations. The executive Government of the University is vested in the Syndicate which consists of (a) the Vice-Chancellor as Chairman; (b) the Director of Public Instruction, Panjab; (c) fifteen ex-officio or ordinary Fellows elected by the Faculties. The Vice-Chancellor is the Principal executive and academic officer of the University.

FACULTIES

For the present, the following Faculties have been constituted :—

<i>Faculties.</i>	<i>Deans.</i>
Arts	Bhai Jodh Singh, M.A., 496, Model Town, Ludhiana.
Oriental	Prof D. C. Sharma, M.A., M.P., Head of the University Department of English, University College, Hoshiarpur.
Science	Dr. P. N. Mehra, D.Sc., Head of the Botany Department C/o Khalsa College, Amritsar.
Education	Shri Iqbal Singh, Director of Public Instruction, Panjab. Chandigarh.
Agriculture	Dr. Arjan Singh, Director of Agriculture, Panjab, Chandigarh.
Medical Sciences	Dr. K. L. Wig, M.R.C.P., Principal, Medical College, Amritsar.
Engineering and Technology	Principal, R. N. Dogra, Panjab Engineering College, Chandigarh.
Veterinary Science	Shri M. S. Malhi, Director, Animal Husbandry and Warden Fisheries, Panjab, Simla.
Law	Dr. Mehr Chand Mahajan, LL.D., Ex-Chief Justice, Supreme Court, 47, Friends Colony, Okhla Road, New Delhi.
Commerce	S. B. Teja Singh, B.A., LL.B., 10, Ludlow Castle Road, Delhi.

ADMINISTRATIVE AND OTHER STAFF

Dr. A. C. Joshi, D.Sc., F.N.I.	Vice-Chancellor and Dean of University Instruction.
Shri J. R. Agnihotri, M.A., (Pb.), B.A. (Hons., Oxon.), Bart-at-Law.	Registrar.

Shri Nand Lal,	Deputy Registrar (Examinations.)—1.
Shri Kirpal Singh Narang, M.A. (Hons.),	Deputy Registrar (Administration).
Shri Trilochan Singh, M.A., LL.B.	Deputy Registrar (Examinations.)—2.
Shri Jagdish Narain,	Chief Account Officer.
Shri Kesar Mal.	Assistant Registrar (Co-ordination).
Shri Bodh Raj Malhotra.	Assistant Registrar (Conduct).
Shri Kishan Chand Walia,	Assistant Registrar (General).
Shri Amrik Singh, M.A.	Assistant Registrar (Examinations).
Shri Babu Ram,	Librarian (Acting).
Shri B. L. Gupta, B.A., D.P.E.	Director of Physical Training (on study leave).
Shri Wadhawa Singh,	Director of Physical Training (Acting).
Shri Joginder Singh	Assistant Director of Physical Training.
Miss Pushpa Anand, B.A.	Directress of Physical Education.

CAMP COLLEGE

At the request of the Ministry of Education, Government of India, a Camp College was started at Delhi to help the refugee students who had moved to that place. This facility has proved to be a boon to the uprooted students from West Panjab as will be clear from the fact that the college had on its rolls 3,192 students on 30-9-1957. Admission to this College are open only to employed persons.

The University maintains a Law College and a Commerce College at Jullundur and a Panjab University College at Hoshiarpur.

LOCATION OF UNIVERSITY TEACHING DEPARTMENTS

Physics.
Chemistry.
Zoology.
English.
History.
Economics.
Mathematics.
Political Science.

Panjab University
College,
Hoshiarpur.

Botany.	}	Khalsa College, Amritsar.
Panjabi.		
Pharmaceutical Chemistry and Pharmacognosy.	}	Medical College, Amritsar.
Pharmaceutics.		
Physiology.	}	Panjab University Camp College, Reading Road, New Delhi.
Journalism.		
Chemical Technology.	}	Panjab University Campus, Chandigarh-3.
Law		
Commerce.	}	Jullundur.
Hindi.		
Sanskrit.		
Geography	}	Govt. College, Ludhiana.
Astronomy.		

TEACHING STAFF

Astronomy :

Shri R. D. Sayal, M.A., In-charge.

Botany :

Dr. P. N. Mehra, D.Sc., F.N.A.Sc., F.N.I., F.B.S., University Professor and Head of the Department.

Shri R. S. Chopra, M.Sc., University Reader in Botany.

Dr. K. S. Thind, M.Sc., Ph.D. (Wisconsin), University Reader in Botany.

Dr. Harbant Singh, Ph.D., Khalsa College, Amritsar.

Shri T. N. Khoshoo, M.Sc., University Senior Lecturer in Botany.

Shri R. S. Pathania, M.Sc., University Lecturer in Botany.

Shri Dasondha Singh, M.Sc., University Lecturer in Botany.

Shri Satish Chander Verma, M.Sc., University Lecturer in Botany.

Chemistry :

Prof. Dr. S. M. Mukherji, M.Sc., Ph.D., D.Sc. (Cal.), University Professor of Chemistry and Head of the Department.

Dr. B. R. Puri, M.Sc., Ph.D., F.R.I.C., Reader in Physical Chemistry.

Dr. K. S. Narang, M.Sc., Ph.D., Reader in Organic Chemistry.

Dr. Ram Chand Paul, M.Sc., Ph.D. (Pb.), Ph.D. (Cantab), F.R.I.C., Reader in Inorganic Chemistry.

Dr. Balwant Singh, M.Sc., D.Sc., F.R.I.C., P.E.S. (I), (Retd.), Senior Lecturer in Analytical Chemistry.

Dr. Inder Sen Gupta, M.Sc., Ph.D., Senior Lecturer in Organic Chemistry (on study leave Wheat Loan Exchange Programme).

Shri Kundan Lal, M.Sc., Lecturer in Inorganic Chemistry.
Dr. M. D. Lakhanpal, M.Sc. Ph.D., Lecturer in Physical Chemistry,
(on study leave).
Dr. O.P. Vig, M.Sc., Ph.D., Lecturer in Organic Chemistry.
Shri Lakh Raj Sharma, M.Sc., Lecturer in Physical Chemistry.

Chemical Technology :

Dr. Jagjit Singh, M.Sc., Ph.D. (Manchester), In-charge.
Mr. M. D. Bhalla, M.Sc. (Tech.) (Pb.), Lecturer.

Economics :

Govt. Staff :

Dr. K. K. Dewett, M.A. (Pb.), B.Com. (Bombay), Ph.D., P.E.S. (I),
Head of the Department.
Shri J. D. Verma, M.A. (Pb.), P.E.S. Senior Lecturer in Economics
(on study leave).

University Staff :

Dr. S. B. Rangnekar, M.A. (Bombay & Cantab), Ph.D. (Bombay),
Reader in Economics (on deputation to Government of India).
Mr. G. Mathur, M.A. (Cantab), Senior Lecturer in Economics.
Dr. Karam Singh Gill, M.A., Ph.D. (Pb.), Senior Lecturer in Econo-
mics (on deputation to the Ford Foundation).
Mr. Manmohan Singh, B.A. (Hons.) (Cantab), Senior Lecturer in
Economics.
Mr. D. R. Handa, M.A. (Pb.), Lecturer in Statistics.

English :

Shri D. C. Sharma, M.A., M.P., Honorary Professor of English and
Head of the Department.
Dr. S. K. Kumar, M.A., Ph.D. (Cantab), Reader in English.
Shri R. K. Kaul, M.A., B.A. (Hons.) (Oxon), Lecturer.

Geography :

Dr. O. P. Bhardwaj, M.A., Ph.D. (London), P.E.S. (I), Reader
and Head of the Department.

Hindi :

Dr. Indar Nath Madan, M.A., Ph.D. (Hindi), Reader in Hindi and
Head of the Hindi Department.

History :

Dr. Hari Ram Gupta, M.A., Ph.D., D.Litt., Professor and Head of
the Department.

Journalism :

Shri P. P. Singh, M.A., in Journalism, University of Missouri,
Columbia (U.S.A.), Diploma in Journalism (London), B.A., LL.B.
(Luck.), Head of the Department.

Mathematics and Computation :

Dr. Hans Raj Gupta, M.A., Ph.D., F.N.I., Professor of Mathematics and Head of the Department.

Dr. R. P. Bambah, M.A., Ph.D., F.N.I., Reader in Mathematics (on leave).

Shri T. P. Srinivasan, M.A., Reader in Mathematics (offg.).

Dr. Som Dutt Chopra, M.A., Ph.D., Senior Lecturer in Mathematics.

Panjabi :

Dr. Mohan Singh, M.A., Ph.D. (Cal.), D.Litt. (Pb.), University Reader and Head of the Panjabi Department.

S. Baldev Singh, M.A. (Persian), M.A. (Panjabi), Gyani, Head Panjabi Teacher.

Pharmaceutics :

Dr. Mohan Singh Sethi, M.B.B.S., M.D., D.T.M., P.C.M.S., Head of the Department.

Dr. K. N. Gaiind, M.Sc., Ph.D., F.R.I.C., A.I.I.Sc., Reader in Pharmaceutics.

Shri Harish Chander Mital, B.Sc., M.Pharm., Lecturer (on study leave).

Pharmacognosy and Pharmaceutical Chemistry :

Prof. P. N. Mehra, D.Sc., F.N.I., F.N.A.Sc., F.B.S., Head of the Department.

Dr. Nazar Singh, M.Sc., Ph.D., Senior Lecturer in Pharmaceutical Chemistry.

S. Niranjan Singh Sekhon, M.Sc. (Pb.), M.Sc. (Cornell), Lecturer in Pharmaceutical Chemistry.

Shri C. K. Atal, M.Pharm., Lecturer in Pharmacognosy (on study leave).

Shri Megh Kumar Jain, M.Sc., Lecturer in Pharmaceutical Chemistry (on study leave).

Shri J. K. Bhatnagar, Lecturer in Pharmacognosy.

Shri Manoharlal Vasisht, M.Sc. (Hons.), Lecturer in Pharmaceutical Chemistry.

Physiology :

Dr. Shiv Kumar, M.Sc., M.B.B.S., P.C.M.S., Professor of Physiology and Head of the Department.

Dr. Ishar Dyal Singh, M.B.B.S., Ph.D., P.C.M.S., Lecturer.

Physics :

Dr. B. M. Anand, M.Sc., Ph.D. (Bristol), University Professor of Physics and Head of the Department.

Dr. P. N. Kalia, M.Sc., Ph.D., Senior Lecturer in Physics.

Shri K. K. Nagpaul, M.Sc., Lecturer in Physics (on study leave).

Shri Prem Kumar, M.Sc., (working in leave vacancy).

Shri P. N. Trehan, M.Sc., Lecturer in Physics (on study leave).
 Shri S. Baldev Singh, M.Sc., Lecturer in Physics (on study leave).

Sanskrit :

Shri Jagan Nath Agrawal, M.A., University Lecturer and Officiating Head of the Department.

Zoology :

Dr. Vishwa Nath, M.Sc., Ph.D. (Cantab), F.N.I., University Professor and Head of the Department.

Dr. Hem Singh Pruthi, M.Sc., Ph.D., D.Sc. (Cantab), Entomologist to the Panjab University.

Dr. Ganpati Parshad Sharma, M.Sc., Ph.D. (Pb.), Ph.D. (Edinburgh), F.A.Z., Reader in Zoology.

Dr. G. L. Arora, M.Sc., D.I.G., Ph.D. (London), F.R.E.S., Reader in Entomology.

Dr. K. N. Trehan, M.Sc., Ph.D. (London), Senior Lecturer in Entomology.

Shri Sukh Dyal, M.Sc., Senior Lecturer.

Dr. Romesh Chander Salija, M.Sc., Ph.D., Lecturer.

Shri Bhupinder Nath Sud, M.Sc., Curator.

Dr. Hem Sagar Vasisht, M.Sc., Ph.D., (Pb.), Lecturer.

Dr. Sukh Dev Raj Bawa, M.Sc., Ph.D. (Pb.), Lecturer.

Political Science :

Shri Bodh Raj Sharma, M.A., Head of the Department.

Shri J. C. Anand, M.A., University lecturer in Political Science.

The following 116 colleges are affiliated to the University in the different Faculties. The name of the Principal is indicated against each College :—

Amritsar, Khalsa College.	Dr. Manmohan Singh, M.B.B.S. (Pb.), D.P.H. (Cambridge), D.T.M. & H. (Cambridge).
Amritsar, Hindu College.	Shri B. L. Kapur, M.A.
Amritsar, Medical College.	Dr. K. L. Wig, M.R.C.P. (Lond.), M.R.C.S. (Eng.), D.T.M. & H. (Lond.), F.G.C.P.
Amritsar, Dental College.	Dr. J. C. Manchanda, L.D.S., R.C.S. (Eng.), F.I.C.D. (U.S.A.).
Amritsar, Saraswati Training College for Women.	Mrs. V. Puri, B.A., B.T., M.T.
Amritsar, D.A.V. College.	Shri B. S. Bahl, M.Sc.
Amritsar, Govt. College for Women.	Mrs. G. K. Manmohan Singh, P.E.S. (I.).
Ambala, S. A. Jain College.	Shri Gian Chand Jain, M.Sc.

Ambala, Sohan Lal Training College.	Dr. R. L. Ahuja, M.A., B.T., Ph.D.
Amabala, D. A. V. College.	Shri Bhagwan Dass, M.A.
Ambala, Dev Samaj College for Girls.	Shri Prem Bal, M.A.
Ambala Cantt. S. D. College.	Dr. Bhupal Singh, M.A., D.Litt.
Ambala Cantt. G. M. N. College.	Shri Jaswant Rai, M.A.
Batala, Baring Christian College.	Shri John A. Petters, M.A.
Banga, Sikh National College.	Shri Amar Singh, Malik, M.Sc., P.E.S. (Retd.).
Bhiwani, Vaish College.	Shri Deva Singh, M.A., B.T., P.E.S. (Retd.).
Bhiwani, Kirori Mal Training College.	Shri N. R. Aggarwal, M.A., B.T., P.E.S. (Retd.).
Bhiwani, Technological Institute of Textiles,	Shri D. L. Sen, M.Sc.Tech. (Manchester), A.II.Sc.F.R.I.C. (London).
Bilaspur, Govt. Intermediate College.	Shri K. L. Sethi, M.A., B.T.
Bhatinda, Rajindra College.	Mrs. H. M. Dhillon, M.Sc.
Barnala, S. D. College.	Shri A. R. Khanna, M.A.
Bajinath, J. S. D. Basic Training College.	Shri Amar Singh Kanwar, M.A., M.Ed.
Chandigarh, Govt. College.	Shri K. S. Thapar, B.A. (Hons.), B.Litt. (Oxon), M.A., Bar-at-Law.
Chandigarh, Panjab Engineering College.	Shri R. N. Dogra, B.A., B.Sc. (Eng.) (Lond.), M.Sc. (Eng.), A.C.G.I. and D.I.C. (Lond.).
Chandigarh, Govt. Post-Graduate Basic Training College.	Shri V. S. Mathur, M.A. (Lond.), Dip.Ed. (Cantab), P.E.S. (I.).
Chandigarh, Govt. College for Women,	Mrs. E. N. Shahani, M.A., T.D. (Lond.).
Dharamsala, Govt. College.	Shri J. N. Dudeja, M.A. (Leeds), D.E.A., Dip. in Education (Leeds).
Dharamsala, Govt. Post-Graduate Basic Training College.	Shri N. D. Sodhi, M.Sc. (Hons. Sch.), B.T.
Ferozepur City, R. S. D. College.	Shri S. B. Sen, Gupta, M.A., LL.B.
Ferozepur City, Dev Samaj College for Women.	Shri Dharam Bir, M.A., B.T.
Fazilka, M. R. College.	Shri Sikandar Lal, M.A. (Hons.).

Faridkot, Brijindra College.	Dr. L. D. Mahajan, M.Sc., Ph.D.
Gurusarsadhar, G. H. G. Khalsa College.	S. Iqbal Singh, B.A., B.T.
Gurusarsadhar G. H. G. Khalsa Training College.	Shri R. K. Kapila, B.Sc.
Gurgaon, D. S. D. College.	Shri S. L. Bahl, M.A.
Gurdaspur, Govt. College.	Shri Inder Singh, M.A., P.E.S. (II).
Hissar, Dayanand College.	Shri Gian Chand, M.A.
Hissar, Govt. College.	Shri Rattan Chand Jain, M.A., Ph.D., P.E.S.
Hissar, Ph. College of Veterinary Science and Animal Husbandry.	Shri P. N. Nanda, M.R.C.V.S., L.V.P.
Hissar, Fateh Chand College for Women.	Bhai Balmukund, M.A., M.Sc.
Haryana, Hindu National College.	Dr. L. C. Khurana, M.A., Ph.D., P.E.S. (Retd.).
Hoshiarpur, D. A. V. College.	Shri Ralla Ram, M.A.
Hoshiarpur, S. D. College.	Shri Sri Kishan Kapur, M.A., B.Sc., P.E.S. (I). Retd.
Hoshiarpur, Pb. University, College.	Dr. K. K. Dewett, M.A., Ph.D., P.E.S. (I).
Jullundur City, Lyallpur Khalsa College.	S. Ram Singh Sachdev, M.A. (Hons.).
Jullundur, D. A. V. College.	Shri Suraj Bhan, M.A., M.Ed. (Lond.), M.L.C.
Jullundur, Doaba College.	Shri G. D. Khanna, M.A., B.T., P.E.S. (I). Retd.
Jullundur, Kanya Mahavidyalaya.	Kumari Lajja Vati.
Jullundur, Hans Raj Mahila Mahavidyalaya.	Kumari Vidya Vati Anand, M.A.
Jullundur, Pb. University College of Commerce.	Shri Krishan Datt, M.A. (Cantab), B.Com., Bar-at-Law.
Jullundur, Montgomery G. N. Basic Training College.	Dr. Harnam Singh, M.A., Ph.D.
Jullundur, Pb. University Law College.	Shri D. R. Mahajan, M.A., LL.B.
Jullundur, Govt. Training College.	Shri R. R. Kumria, M.A., P.E.S. (I).
Karnal, Dyal Singh College.	Shri Rama Krishna Sharma, M.Sc.
Karnal, Dairy Science College.	Dr. Noshir Dastur, M.Sc., Ph.D.

Kaithal, R. K. S. D. College,	Shri P. Swaroop, M.A., B.A. (Hons.).
Kalal Majra, (Khanna), A. S. College.	Shri Sri Ram, M.A., B.T.
Khanna, Saraswati Sanskrit College.	Shri Vishwa Nath Shastri,
Kapurthala, Randhir College.	Shri Dina Nath Kak, M.A.
Ludhiana, Arya College.	Shri R. N. Kapur, M.Sc.
Ludhiana, Gujranwala Guru Nanak Khalsa College.	S. Sujan Singh, M.A., LL.B.
Ludhiana, Govt. College.	Dr. H. R. Sarma, M.Sc., Ph.D. (Lond.), P.E.S. (I).
Ludhiana, Malwa Training College.	Shri Ruben Dass, M.A., B.T., P.E.S. (Retd.).
Ludhiana, Govt. College for Women.	Miss K. Pasricha, M.A., P.E.S. (I).
Ludhiana, Govt. Agri. College.	Dr. S. S. Purewal, P.A.S. (I).
Ludhiana, Christian Medical College.	Dr. E. R. B. Snow, M.B.B.S. (Lond.).
Ludhiana, Guru Nanak Engineering College.	Shri Tara Singh, B.Sc. (Engg.) Hons. (Lond.), E.E.I. (Roorkee).
Moga, D. M. College,	Shri Ugra Sen, M.A., P.E.S. (Retd.).
Mahilpur, S. G. G. S. Khalsa College,	S. Harbhajan Singh, B.A. (Hons.), B.T.
Muksar, Govt. College.	Dr. Sher Singh, M.A., Ph.D.
Muksar, Khalsa Training College.	S. Harnam Singh, M.A., B.T.
Mandi, Vallabh Mahavidyalaya,	Shri Raj Narain Mathur, M.A., B.A. (Hons.), F.R.E.S.
Malerkotla, Govt. College.	Shri M. L. Khosla, M.A., B.T.
Malerkotla, S. A. Jain College.	Shri T. S. Bagga, M.A.
Mandi Dabwali, Guru Nanak College.	Prof. Jiwan Singh, M.Sc.
Nawanshahr Doaba, R. K. Arya College.	Shri Nand Lal, M.A.
Nabha, Ripudaman College.	Shri Arjan Singh Shante, M.Sc., P.E.S. (I).
Narnaul, Govt. College.	Shri B. N. Chopra, M.A.
Nangal Ambia, Khalsa College.	Shri Kuldip Singh Khurana, M.A.
New Delhi, Punjab University Camp College.	Shri D. N. Bhalla, M.A., B.A. (Cantab.).

Nahan, Shri Guru Ram Rai Degree College.	Shri S. N. Sharma, M.A., B.T.
Panipat, Arya College.	Shri Sundar Dass Malhotra, M.Sc.
Pathankot, S. M. D. R. S. D. College.	Shri F. C. Arora, M.A.
Patiala, Mahendra College.	Shri K. L. Malhotra, M.A., P.E.S. (I).
Patiala, Govt. College for Women.	Mrs. G. Parmpal Singh, M.A.
Patiala, Yadvindra College.	Lt. Col. F. A. Von Goldstein, M.A. (Cantab).
Patiala, State College of Education.	Dr. Goverdhan Lal, D.Sc.
Patiala, Govt. Bikram College of Commerce.	Shri Raj Narain, M.A., B.Com., LL.B.
Patiala, Medical College.	Dr. Amarjit Singh, M.D., M.R. C.P. (Lond.), D.T.M. (Cal.).
Patiala, Dental College.	Dr. Amarjit Singh, M.D., M.R. C.P. (Lond.), D.T.M. (Cal.).
Patiala, Thapar Institute of Engineering and Technology.	Shri A. C. Sahgal, B.A., B.Sc.Tech. (Manch.), M.I.E.E. (London).
Phagwara, Ramgarhia College.	S. Amar Singh, M.Sc., LL.B.
Phagwara, Ramgarhia Training College.	Shri Sampuran Singh, M.A.T.D. (Lond.), P.E.S. (Retd.).
Palwal, S. D. College.	Shri R. C. Sharma, M.Sc.
Qadian, Sikh National College.	Bawa Harkishan Singh, M.A.
Rewari, Ahir College.	Shri I. B. Verma, M.A., M.Ed.
Rohtak, Vaish College.	Dr. H. C. Batra, M.A., Ph.D., B.T.
Rohtak, Chhotu Ram College of Education.	Shri Sohan Singh Gill, M.A., B.T.
Rohtak, A. I. J. H. M. College.	Shri Girwar Singh, M.Sc.
Rohtak, Govt. College.	Dr. Jagjiwan Singh, M.Sc., Ph.D. (Lond.).
Raman Mandi, S. N. Inter College.	Shri A. Vishwanathan, M.A., LL.B.
Rupar, Govt. College.	Shri A. N. Kapur, M.A., B.A. (Hons.), Lond., P.E.S. (I).
Rupar, Govt. College of Physical Education.	Shri S. R. Mahindroo, B.A., D.P.E., P.E.S. (I).
Sangrur, Ranbir College.	Shri Nand Kishore Aggarwal, M.A.
Sangrur, Ranbir College for Women.	Mrs. J. K. Grewal, M.A., LL.B., B.T.
Sirsa, National College.	Shri Ram Prakash, M.Sc.
Simla, Govt. Training College for Women,	Mrs. S. S. Paul, M.A., P.E.S. (I).

Simla, B. M. College.	Shri V. B. Anand, M.Sc.
Simla, S. D. College.	Shri B. K. Sharma, M.A.
Sathiala, National College.	Shri B. L. Sharma, M.A., LL.B.
Sonepet, Hindu College.	Sardar H. K. Bhattacharya, M.A.
Sonepet, C. R. Arya College.	Shri S. N. Sanyal, M.A.
Sidhwan Khurd, Khalsa Basic Training College for Women.	S. Amarjit Singh Sodhi, M.A., B.Ed.
Sidhwan Ghurd, Khalsa Training College for Women.	Miss S. K. Autar Singh, M.A., B.T.
Tanda Urmar, Govt. College.	Shri D. P. Gupta, M.A., B.A. (Hons.).
Yamunanagar, M. L. National College.	Shri R. N. Rihan, M.A.

EXAMINATION AND THEIR DURATIONS

Intermediate Arts and Science, 2 years after Matriculation ; B.A., B.Sc. (Pass), 2 years after Intermediate ; First Examination in Agriculture, 2 years after Matriculation ; B.Sc. (Agri.) 2 years after First Examination in Agriculture ; B.Com. three years after Intermediate ; B.Sc. (Engg.) 5 years after Intermediate Science ; LL.B., 2 years after graduation ; LL.B. (Final), one year after LL.B. ; B.T., one year after graduation ; B.Ed., one year after graduation ; B.V.Sc., 4 years after Intermediate Science ; B.Pharm., 3 years after Intermediate Medical Group ; B.Sc. (Hons.) School in Physics, Chemistry, Botany and Zoology, 3 years after Intermediate (Science) M.B.B.S., 5½ years after Intermediate (Medical Group) ; B.Sc. (Textiles), 3 years after Intermediate Science (Medical Group) ; B.Sc. (Hons.) School in Mathematics, 3 years after Intermediate with Mathematics ; Certificate in French, one year after Intermediate ; Statistics, one year after graduation.

HIGHER DEGREES

M.A. in Mathematics, History, Political Science, Economics, Philosophy, Psychology, Geography, English, Sanskrit, Persian, Arabic, French, Hindi, Panjabi, Urdu, German, Latin, Greek, Hebrew, 2 years after graduation ; M.Sc. in Agriculture, 2 years after B.Sc. (Agri.) ; M.Sc. (Hons.) School in Physics, Chemistry, Botany, Zoology, Mathematics, one year after B.Sc. (Hons.) School ; M.Ed., one year after M.A., B.T. or B.A., B.T. with three years teaching experience ; M.Sc. (Chem. Tech.) one year after B.Sc. (Hons.) School or 2 years after B.Sc. (Pass).

M.Com., LL.M., M.Sc. (Engg.), M.S., M.D., Master of Pharmacy, M.V.Sc., Ph.D., D.Litt., D.Sc., D.O.L. and LL.D. Degrees are also granted by this University.

DIPLOMAS

Diploma in Journalism, one year after graduation; Diploma in Tuberculosis Diseases (D.T.D.), one year after M.B.B.S. for those who have held house appointments in a recognised teaching Hospital and 2 years for those who have been engaged in the practice of medicine from the date of obtaining the qualification; Diploma in Ophthalmic Medicine and Surgery (D.O.M.S.), one year after M.B.B.S. or L.M.S.; Diploma in Laryngology and Otology (D.L.O.) Graduates in the Faculty of Medicine can take this Examination at any time after undergoing the prescribed course; Diploma in French, one year after certificate examination in French or Intermediate or B.A. with French as elective subject, Diploma in Physical Education, one year after graduation; Diploma in Pharmacy and Dresses Courses, 2 years after Matriculation.

Proficiency, High Proficiency, and Honours Examinations in Modern Indian Languages, i.e. in Hindi, Panjabi and Urdu and in Oriental Title Examinations i.e. in Sanskrit, Persian and Arabic are also conducted by this University.

PUBLICATION BUREAU

As a part of the policy to replace English as medium of instruction and examination a Bureau of Publication was established in 1948 with the following aims and objects:

1. To prepare and encourage the production and translation of text-books;
2. To translate and encourage the translation of standard works from other languages; and
3. To prepare and encourage the publication of standard works with a view to enrich the literature in both the languages (Hindi and Panjabi).

Shri Raghunandan Shastri, M.A., M.O.L., is officiating as Secretary of the Bureau.

UNIVERSITY PUBLICATIONS

The University publishes Arts and Science Journals from time to time. The Chief Editor of the Arts Journal is Prof. D. C. Sharma, M.A., M.P., Head of the Panjab University English Deptt. and of the Science Journal Dr. Vishwa Nath, M.Sc., Ph.D., Head of the Panjab University Zoology Department.

A Magazine called "The Panjab University News" is being started from January, 1958. This will contain important decisions taken by the University from time to time and the various curricular and co-curricular activities of the affiliated colleges.

LIBRARY

The Panjab University Library located in U.S. Club, at Simla, has got 68,206, consisting of 57,173 in the General Section and 10,309 books and 724 manuscript on 30-9-57. About a lac of rupees is being spent annually on the purchase of books and journals.

NATIONAL CADET CORPS

A number of N.C.C. battalions has been allotted to 65 colleges. This Corps has taken the place of the University O.T.C. Members of the N.C.C. may offer Military Training as additional optional Paper (in place of additional optional vernacular) for the Inter. and Degree Examinations. The 3rd Panjab Girls' Troops of the N.C.C. has been raised in the Government College for Women, Ludhiana, Kanya Mahavidyalaya, Hans Raj Mahila Mahavidyalaya, Jullundur, Government College for Women, Amritsar and Government College for Women, Patiala.

EXTENSION LECTURES

The University has also been organizing extension lectures by inviting specialists in their subjects to address the students in various colleges at central places. The lectures are of a general academic or specialised nature and are delivered on payment of a nominal fee.

SCHOLARSHIPS

The following scholarships are awarded:—

<i>Name of Examination</i>	<i>(April, 1957)</i>	<i>No. of Scholarships</i>
Matriculation	..	127
Intermediate	..	54
B.A.	..	1
B.Sc.	..	1
B.A. Hons. in English	..	1
B.A. Hons. in Economics	..	1
B.A. Hons. in Pol. Sc.	..	1
B.A. Hons. in Sanskrit	..	1
B.A. Hons. in Hindi	..	1

<i>Name of Examination</i>	<i>(April, 1957)</i>	<i>No. of Scholarships</i>
B.A. Hons. in Geography	..	1
B.A. Hons. in Mathematics	..	2
B.A. Hons. in Philosophy	..	1
B.A. Hons. in History	..	1
1st B.Sc. Textile	..	1
2nd B.Sc. Textile	..	1
B.Com. Previous	..	1
B.Com. Part I	..	1
B.Pharm. Part I	..	1
B.Pharm. Part II	..	1
B.Sc. Hons. School in Physics	..	1
E.Sc. Hons. School in Chemistry	..	1
B.Sc. Hons. School in Botany	..	1
B.Sc. Hons. School in Zoology	..	1

Total number of students on 30-9-57 in affiliated colleges were 55,875, of these 8,770 were women students.

SUBJECTS IN WHICH FACILITIES FOR POST-GRADUATE STUDIES EXIST

English, Economics, Zoology, Physics, Chemistry, History, Botany, Mathematics, Sanskrit, Hindi, Panjabi, Political Science, Geography, Philosophy, Psychology, Arabic, Persian, Urdu, Commerce, Agriculture, Medicine, Surgery, Veterinary, Law and Education.

FOREIGN INFORMATION BUREAU

The University has a Foreign Information Bureau for purposes of attending to enquiries regarding Technical Training and professional studies within the Republic of India and from students desirous of going abroad for higher studies at the Universities in U.K., U.S.A., Australia, New Zealand, Canada, France and Japan.

SPORTS

Shri Wadhawa Singh, officiating as Director of Physical Training and Miss P. Anand, B.A., Directress of Physical Education, are in charge of the Physical Welfare of students. In addition, each affiliated college has a Physical Director, who conducts sports and other physical activities among the students of the colleges.

PANJAB
CURRENT

STATEMENT SHOWING INCOME AND EXPENDITURE FOR THE

<i>Income</i>	<i>Cash</i> Rs.	<i>Securities</i> Rs.
Opening balance on 1-4-1956.	7,77,673 6 5	*23,15,509 2 3
Fees of Examinations.	61,68,463 12 9	
Registration Fees, Certificate Fees, etc.	3,41,392 9 9	
University Tuition Fees.	74,220 15 0	
Law College.	1,34,374 15 6	
University College of Commerce.	21,345 8 0	
Camp College.	4,06,284 2 3	
Panjab University College.	3,05,634 4 0	
Grants from :		
(i) University Grants Commission.	5,48,256 0 0	
(ii) Ministry of Education & C. S. I. R.	42,037 2 0	
Grants from Panjab Govt.		
(i) For General purposes.	3,78,530 0 0	
(ii) For location of University at Chandigarh.	5,00,000 0 0	
Interest on Investments.	35,250 1 0	
Library.	235 6 0	
Publication Bureau. (Sale of Books).	1,60,056 1 9	
Miscellaneous.	1,35,723 14 3	
Suspense.	3,45,603 14 6	
By redemption Proceeds of Short Term Deposits.	18,00,000 0 0	
By Investment in Short Term Deposits.		**20,00,000 0 0

Total	1,21,75,082 1 2	43,15,509 2 3
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*Face Value. Rs. 24,24,400	Short Term Deposits for Rs. 18,00,000			
**Face Value. Rs. 20,00,000	redeemed on :			
		Rs.		Rs.
Rs. 44,24,400	1-5-56	1,00,000	21-6-56	2,00,000
	5-5-56	1,00,000	20-7-56	3,00,000
	21-5-58	1,00,000	12-9-56	1,00,000
	30-5-56	1,00,000	21-9-56	3,00,000
	4-6-56	2,00,000		
O. P. MALHOTRA,	8-6-56	2,00,000		18,00,000
Resident Senior Auditor,	15-6-56	1,00,000		
Panjab University.				

UNIVERSITY

ACCOUNT

PERIOD — 1ST APRIL 1956 TO 31ST MARCH, 1957.

<i>Expenditure</i>	<i>Cash Rs.</i>	<i>Securities Rs.</i>
General Administration.	13,08,329 0 10	
Remuneration to Examiners.	14,25,616 3 0	
Printing Question Papers and Secrecy Work.	1,50,000 0 0	
Conducting Examinations.	15,73,356 4 9	
Law College.	1,46,638 8 9	
University College of Commerce.	86,824 14 0	
Camp College.	4,59,406 1 9	
Panjab University College.	3,55,473 4 6	
University Teaching.	11,61,904 9 11	
Improvement of Education.	2,89,427 12 9	
Library.	1,75,795 2 0	
Publication Bureau.	1,23,226 9 0	
Publication of Calendars, Syllabi, etc. and Text Books other than those pub- lished by the Publication Bureau.	6,712 5 6	
Miscellaneous.	4,86,885 3 6	
Amount transferred to Building Fund.	24,50,000 0 0	
	1,01,99,596 0 3	
To redemption Proceeds of Short Term Deposits.		***18,00,000 0 0
To amount invested in Short Term Deposits.	20,00,000 0 0	
Add closing balance on 31-3-1957.	— 24,513 15 1	****25,15,509 2 3
Total	1,21,75,082 1 2	43,15,509 2 3

Short Term Deposits for Rs. 20,00,000
purchased on :

	<i>Rs.</i>	<i>Rs.</i>
24-7-56	5,00,000	19-12-56 3,00,000
3-8-56	3,00,000	22-12-56 1,00,000
24-8-56	1,00,000	24-1-57 2,00,000
30-10-56	3,00,000	
1-11-56	1,00,000	20,00,000
29-11-56	1,00,000	

***Face Value. Rs. 18,00,000
****Face Value. Rs. 26,24,400

Rs. 44,24,400

J. R. AGNIHOTRI,
Registrar,
Panjab University.

PATNA UNIVERSITY

INTRODUCTION

Character of the University

The Patna University Act of 1917 was repealed in 1951 by the State Legislature and another Act XXV of 1951 was passed with a view to establish a teaching and residential University at Patna with full control over all Government and non-Government Colleges situated within the Municipal limits of the town. This Act came into force from the 2nd January, 1952. The affiliating and examining functions of the old University were transferred to the Bihar University in respect of colleges of the State of Bihar situated outside the area of the Patna Municipality and the control over the Matriculation Examination was transferred to the School Examination Board created by two different Acts which came into force from the same date, i.e., the 2nd January 1952.

OFFICERS OF THE UNIVERSITY

Chancellor :

Dr. Zakir Husain, M.A., Ph.D., Governor of Bihar.

Vice-Chancellor :

Dr. Balbhadra Prasad, D.Sc. (Lond.), F.N.I.

Treasurer :

Shri Ram Charitra Singh, M.Sc., B.L. (Cal.).

Registrar :

Shri Jagatnandan Sahay, M.A. (Pat.), T.D. (Lond.).

Deputy Registrar :

Shri Syed Yawar Hussain, B.A. (Pat.).

Budget & Accounts Officer :

Shri Ananta Narayan Prasad, B.A. (Hons.), I.A. & A. S. (Retd.).

Assistant Registrar :

Pandey Shri Kant Sharma, M.A. (Pat.), Dip.-in-Ed. (Pat.).

DEANS OF THE FACULTIES

Dr. Kali Kinkar Datta, M.A., Ph.D., P.R.S., Dean, Faculty of Arts.

Dr. N. S. Nagendra Nath, M.Sc., Ph.D. (Cantab), F.A.Sc., F.N.A.Sc.
Dean, Faculty of Science.

Shri Vinayak Vishnu Deshpande, M.L., Dean, Faculty of Law.

- Shri Rameshwar Prasad, M.Sc., M.Ed., Dean, Faculty of Education,
 Shri Nagennra Nath Ghosh Dastinar, M.Sc.Tech., A.M.C.I. (Manchester)
 A.M.I.E. (India), Dean, Faculty of Engineering.
 Dr. Gaya Prasad, B.Sc., M.D. (Pat.), M.R.C.P. (Lond. & Edin.), D.C.P.
 (Lond.), D.T.M. (L'pool), Dean, Faculty of Medicine.
 Dr. Babu Ram Misra, M.A., LL.B., Ph.D., D.Sc., Dean, Faculty of
 Commerce.

UNIVERSITY DEPARTMENTS FOR POST-GRADUATE TEACHING
 WITH THE NAMES OF THE HEADS OF DEPARTMENTS

<i>Ancient Indian History</i>	
<i>and Culture</i>	Dr. B. P. Sinha.
<i>Applied Economics</i>	
<i>and Commerce</i>	Dr. B. R. Misra.
<i>Arabic</i>	Shri H. M. Quddus.
<i>Bengali</i>	Dr. T. Chowdhury.
<i>Botany</i>	Dr. R. P. Roy.
<i>Chemistry</i>	Dr. P. C. Sinha.
<i>Economics</i>	Shri Dibakar Jha.
<i>Education</i>	Shri Rameshwar Prasad.
<i>English</i>	Dr. R. K. Sinha.
<i>Psychology</i>	Shri M. Z. Abdin.
<i>Geology</i>	Dr. S. C. Chatterji.
<i>Geography</i>	Dr. P. Dayal.
<i>History</i>	Dr. K. K. Datta.
<i>Hindi</i>	Shri Jagannath Roy Sharma.
<i>Labour and Social Welfare</i>	Shri A. D. Singh.
<i>Mathematics</i>	Dr. N. S. Nagendranath.
<i>Maithili</i>	Dr. Sudhakar Jha Shastri.
<i>Political Science</i>	Dr. P. S. Muhar.
<i>Persian</i>	Dr. Iqbal Hussain.
<i>Philosophy</i>	Shri Hari Mohan Jha.
<i>Physics</i>	Dr. B. N. Singh.
<i>Sanskrit</i>	Dr. T. P. Chowdhury.
<i>Sociology</i>	Shri N. Prasad.
<i>Statistics</i>	Shri Devendra Mishra.
<i>Urdu</i>	Dr. S. A. Ahmad.
<i>Zoology</i>	Dr. Suresh Keshava
<i>Anatomy</i>	Shri T. P. Sinha.

<i>Physiology</i>	Dr. A. S. Sinha.
<i>Pharmacology</i>	Dr. G. Achari.
<i>Pathology</i>	Dr. Gaya Prasad.
<i>Medicine</i>	Dr. M. A. Hai.
<i>Surgery</i>	Shri U. P. Sinha.
<i>Obstetrics and Gynaecology</i>	(Miss) M. P. John.
<i>Ophthalmology</i>	Thakur Paras Nath Sinha.

COLLEGES AND INSTITUTES

The following are the Constituent Colleges and Institutes of the Patna University with the names of their Principals and Directors

<i>College :</i>	<i>Principal :</i>
Patna College	Shri K. Ahmad, M.A. (Pat.), B.A. (Cantab.)
B. N. College	Dr. D. P. Vidyarthi, M.A. (Patna), Ph.D. (London).
Science College	Shri M. Q. Doja, B.A. (Cantab.)
Patna Women's College	Sister M. Lucile, A.C.
Magadh Mahila College	Smt. Ramola Nandi, M.A. (Patna).
Patna Training College	Dr. D. P. Gupta, M.A., M.Ed., Ph.D.
Bihar College of Engineering	Shri N. N. G. Dastidar, B.Sc. (Tech.), A.M.C.I. (Manchester), A.M.I.E. (India).
P. W. Medical College	Dr. Gaya Prasad, B.Sc. (Hons.), M.D. (Pat.), M.R.C.P. (Lond. & Edin.), D.C.P. (Lond.), D.T.M. (L'Pool), D.C.H. (Lond.)
Patna Law College	Shri V. V. Deshpande, M.L.
Women's Training College	Smt. Shakuntala Sinha, M.A., Dip-in-Ed.

<i>Institute :</i>	<i>Incharge :</i>
Institute of Psychological Research & Service	Shri D. N. Sinha, M.A. (Pat.), M.Sc. (Cantab.)
Institute of Music	Shri L. N. Kapur.
Institute of Public Administration	Dr. P. S. Muhar (Hony. Director).

BOARDS OF COURSES AND STUDIES

There is a Board of Courses and Studies for each of the following subjects :—

1. Hindi,
2. Sanskrit,
3. English,
4. Urdu,
5. Maithili,
6. Bengali,
7. Arabic,
8. Persian,
9. History,
10. Ancient Indian History and Culture,
11. Economics,
12. Labour & Social Welfare,
13. Sociology,
14. Political

Science, 15. Philosophy, 16. Psychology, 17. Geography, 18. Music, 19. Domestic Science, 20. Mathematics, 21. Physics, 22. Chemistry, 23. Botany, 24. Zoology, 25. Geology, 26. Statistics, 27. Education, 28. Law, 29. Commerce, 30. Engineering, 31. Medicine.

Note :—The functions with respect to the following subjects are performed by the Boards of Studies noted against each :—

French and German	Board of Courses of Studies in English.
Pali	Board of Courses of Studies in Sanskrit.
Nepali	Board of Courses of Studies in Hindi.
Oriya	Board of Courses of Studies in Bengali.
International Relations and Public Administration	Board of Courses of Studies in Political Science.

CONSTITUTION OF THE UNIVERSITY

The following are the authorities of the University—

The Senate, the Syndicate, the Academic Council, the Faculties, the Boards of Courses and Studies, and such other authorities as may be declared by the Statutes to be authorities of the University from time to time.

The following are the officers of the University :—

The Chancellor, the Vice-Chancellor, the Treasurer, the Registrar, the Deputy Registrar, the Assistant Registrar, the Budget and Accounts Officer, the Deans of the Faculties, the University Engineer, the Medical Officers, and such other persons as may be declared by the Statutes to be the officers of the University from time to time.

NUMBER OF STUDENTS

The following are the figures of students in the various constituent Colleges and University Departments of the University as on the 31st of March, 1957 :—

A. <i>Constituent Colleges :</i>	Men	Women	Total
1. Bihar College of Engineering	336	—	336
2. Bihar National College	2,241	—	2,241
3. Magadh Mahila College	—	587	587
4. (a) Patna College	919	8	927
(b) B.Com. Classes	237	1	238
5. Patna Law College	602	7	609
6. Patna Science College	860	33	893
7. Patna Training College	115	—	115
8. Patna's Women's College	—	459	459
9. Patna Women's Training College	—	53	53
10. Prince of Wales Medical College	550	107	657

B. University Departments :

(a) Faculty of Arts :		Men	Women	Total
1. Ancient Indian History and Culture		18	1	19
2. Arabic		3	—	3
3. Bengali		2	2	4
4. Economics		147	8	155
5. English		149	3	152
6. Geography		37	5	42
7. Hindi		157	13	170
8. History		111	3	114
9. Labour & Social Welfare		76	4	80
10. Maithili		8	—	8
11. Persian		9	—	9
12. Philosophy		131	20	151
13. Political Science		176	18	194
(i) Public Administration		18	2	20
(ii) International Relations		10	3	13
14. Psychology		72	3	75
15. Sanskrit		12	5	17
16. Sociology		164	9	173
17. Urdu		20	1	21
(b) Faculty of Science :				
1. Botany		28	4	32
2. Chemistry		72	1	73
3. Geology		36	2	38
4. Mathematics		115	4	119
5. Physics		56	2	58
6. Statistics		75	—	75
7. Zoology		22	10	32
(c) Faculty of Commerce :				
Applied Economics & Commerce		216	—	216
(d) Faculty of Education :				
Department of Education		13	11	24
(e) Faculty of Medicine :				
1. Anatomy		—	—	—
2. Medicine		7	—	7
3. Obstetrics & Gynaecology		—	—	—
4. Ophthalmology & Otorhinolaryngology		7	—	7

	Men	Women	Total
5. Pathology	5	1	6
6. Pharmacology	—	—	—
7. Physiology	—	—	—
8. Surgery	6	—	6
C. Institutes :			
1. Institute of Psychological Research and Service	—	—	—
2. Institute of Public Administration	Vide Col. 13 (i) above.		
3. Institute of Music	12	17	29
Grand Total :	7,850	1,412	9,262

NUMBER OF CANDIDATES SUCCESSFUL AT THE DIFFERENT EXAMINATIONS OF 1956

The number of students admitted to the various examinations in the year 1956 was 6,090. The following table shows the number of candidates who had appeared at the Annual and Supplementary Examinations with the number and percentage of passes in each case.

Name of Examinations	ANNUAL			SUPPLMENTARY		
	No. appeared	No. Passed	Per-centage	No. appeared	No. passed	Per-centage
D.Litt.	3	2				
Ph.D.	8	9*				
M.A.	537	447	83.24			
M.Sc.	175	114	65.14			
M.Com.	80	69	86.25			
M.Ed.	31	31	100			
D.O. Part I	2	2	100			
D.L.O. Part I	2	2	100			
I.A.	911	560	61.47	255	86	33.76
I.Sc.	604	370	61.92	139	88	63.30
I.Com.	103	50	48.54	27	13	48.14
B.A. (Hons.)	435	351	80.68			
B.A. (Pass)	303	183	60.39	144	80	55.55
B.Sc. (Hons.)	117	80	68.37			

* One candidate who appeared for D.Litt. was awarded the Ph.D. degree.

Name of Examinations	ANNUAL			SUPPLEMENTARY		
	No. appeared	No. passed	Percentage	No. appeared	No. passed	Percentage
B.Sc. (Pass)	117	54	46.15	63	32	50.79
B.Com.	101	83	82.17	15	15	100
Dip-in-Ed.	164	141	85.97			
Law Part I	264	179	67.80	169	121	71.59
Law Part II	248	205	81.45	93	63	67.74
I.Sc. (Eng.) Part I	65	49	75.38	19	10	52.63
I.Sc. (Eng.) Part II	60	41	68.33	19	18	94.74
B.Sc. (Eng.) Part I (Civil)	130	81	62.30	55	31	54.54
B.Sc. (Eng.) Part I (Elec.)	4	3	75	1	1	100
B.Sc. (Eng.) Part I (Mech.)	2	2	100	No candidate.		
B.Sc. (Eng.) Part II (Civil)	100	80	80	20	14	70
B.Sc. (Eng.) Part II (Mech.)	2	2	100	No candidate.		
First M.B., B.S.	106	68	64.24	47	34	72.34
Second M.B., B.S.	99	67	67.67	37	33	89.18
Final M.B., B.S. Part I	19	14	73.68	6	4	66.66
Final M.B., B.S. Part II	111	64	57.65	65	39	51
Certificate in Music	3	3	100			
Diploma in International Relations	2	2	100			
Diploma in Public Administration and Local Government	7	5	71.42			
	4,916	3,414	69.44%	1,174	682	58%

RESEARCH SCHOLARSHIPS

I. An annual sum of Rs. 36,000/- is spent on awarding Research Scholarships of the value of Rs. 200/-per month each.

II. The Scholarships are distributed as follows:—

(i) Faculty of Arts	9
(ii) Faculty of Science	7
(iii) Faculty of Medicine	2
(iv) Faculties of Engineering and Law	1
(v) Faculty of Education	1
(vi) Faculty of Commerce	2

READERSHIP

There are six Readerships in the University, viz. :—

1. Banaili Readership in Economics.
2. Ramdin Readership in Hindi.
3. Sukhraj Rai Readership in Natural Science.
4. Maharajadhiraja Darbhanga Readership in Ancient Indian History and Culture.
5. Dr. S. K. Sinha Readership in International Law or Comparative Politics.
6. Hathwa Readership in Statistics.

HATHWA SCHOLARSHIPS

An allowance of Rs. 150/- per month is paid to the Hathwa Fellow. There are two Fellowships in the following subjects :—

1. Sanskrit.
2. History.

Hathwa Scholarships are awarded in the following subjects as noted against each :—

- | | | |
|---|----|---|
| 1. Mechanical Engineering at Rs. 60/- per month | .. | 2 |
| 2. Electrical Engineering at Rs. 60/- per month | .. | 2 |
| 3. Agriculture at Rs. 50/- per month | .. | 2 |
| 4. Higher Training in Education at Rs. 60/- per month | .. | 4 |
| 5. Medicine at Rs. 60/- per month | .. | 4 |

Sir Ganesh Dutta Singh Loan Scholarship :—Loan Scholarships are granted from this Fund to permanent residents of the area within the jurisdiction of Patna University and are awarded for higher studies in Medicine or in Science in India or abroad to the officers in the medical and public health services of Government and local bodies in the said area, provided that the local body concerned guarantees repayment of the loan. The loan scholarships are also awarded to Professors, Lecturers or Demonstrators who are in the service of the Government or in the colleges which are aided from Government Funds, in the following scientific subjects, namely : Physics, Chemistry, Botany, Geology, Physiology. The value of the loan scholarships to be given in each case, and the instalments in which it shall be paid and recovered is determined by the Syndicate. The selected candidates are required to execute a bond in the prescribed form and to insure their life in favour of the University for a sum equal to the amount of the loan scholarship to be paid. The policy is reassigned to the candidates on their paying all the amounts due.

Sir Ganesh Singh Trust Fund :—Loan Scholarships are granted from this Fund to candidates who are natives of or domiciled in the Patna,

Tirhut, Bhagalpur or Chotanagpur Divisions and are awarded for higher and special studies in India or abroad to the candidates who wish to take up the following subjects, namely (a) any subject which is likely to help the development of Industry or Agriculture in the Province. (b) Physics, Chemistry, Botany, Engineering or Psychology, Military Science, Navigation or the like Science, (c) such vocational subjects as printing or pencil making which may help to develop useful cottage industries and (d) the comparative study of different schools of Medicine. The value of the loan scholarships to be given in each case, and the instalments in which it shall be paid and recovered, are determined by the Vice-Chancellor, Patna University. The interest at 3 per cent per annum is chargeable on the loan which can be waived by the Vice-Chancellor. The selected candidate is required to execute a bond on the prescribed form, to provide a surety who is to execute a surety bond pledging his immovable properties of a value not less than double the amount of the loan and to insure his life in favour of the Vice-Chancellor for a sum equivalent to the total amount of the scholarship estimated to be paid.

There are also a number of University Medals: (a) A gold medal and a prize of the value of Rs. 200/- for purchase of books are awarded to the candidates standing first in the First Class in each subject of the M.A. and M.Sc. and M.Com. examinations. Besides, there are a number of gold medals to be awarded for proficiency in different subjects. They are as follows:—

Shrimati Radhika Sinha Gold Medal, Shrimati Ram Kishori Gold Medal, Bakshi Ramayad Sinha Gold Medal, Sifton Hindi Gold Medal, Sifton Urdu Gold Medal, Shaw Memorial Gold Medal, Gait English Gold Medal, Linlithgow Gold Medal, Macpherson Gold Medal, Walford Gold Medal, Sifton Gold Trust Fund (For Medicine), Jyotirmayee Silver Jubilee Commemoration Gold Medal, Sir Jwala Prasad Gold Medal, Rai Saheb Ramji Das Gupta Gold Medal, Gidhaur Gold Medal, Madhava Medal and Prize Fund, Rabindra Nath Mukherjee Gold Medal, I. N. Chandra Gold Medal, Wheeler Gold Medal, Ram Bhajan Singh Pipra Gold Medal, Rai Bindeshwari Gold Medal, Langat Singh Gold Medal, Nirsu Narain Singh Gold Medal, Shoola Bala Das Gold Medal, Brajnandan Singh Memorial Gold Medal, Maheshwar Silver Jubilee Commemoration Gold Medal, Justice Kulwant Sahay Gold Medal, Sir Ali Imam Gold Medal, Radha Krishna Silver Jubilee Commemoration Gold Medal, Motilal Dhandharin Gold Medal, Raja Sir Raghunandan Gold Medal, Sachchidananda Sinha Gold Medal, Sita Devi Memorial Gold Medal, D. N. Sen Memorial Gold Medal, Shrimati Raj Kishori Bhatia Gold Medal, A. N. Sarkar Gold Medal, Tara Prasad Srivastava Gold Medal, Jai Bahadur Medal, Rev. Bhai Kedar Nath Dey Memorial Gold Medal, Sarna Kamal Sahitya Medal, Maina Jagdish Gold Medal, Parvati Raghunath Gold Medal, Uday Narain Silver Medal, Lalita Manmati Silver Medal, Bimal Kumar Sen Silver Medal, Rajesh-

wari Silver Medal, Amir Chandra Silver Medal, Kedar Nath Banerjee Scholarship and Anilbala Devi Silver Medal, Rabindra Nath Dutt Memorial Medal, Surya Mohan Thakur Endowment (a) Sunderbati Thakurain Endowment and Lakhima Medal Fund, (b) Woogra Mohan Thakur Endowment and Deep Medal Fund, Shri Ramchandra Pandit Endowment, Rai Bahadur Surya Prasad Endowment Fund, .Nikhil Bharat Banga Sahitya Sammelan Medal, Nand Rani Gold Medal, Hussain Gold Medal, Prof. V. K. N. Menon Gold Medal, Dr. T. C. Guha Gold Medal, Sohan Lal Kohli Gold Medal, Rani Prabhabati Banaili Medal.

A cash prize of Rs. 750/- is also awarded out of the P. C. Talents Prize Fund to the candidate securing highest marks at the M.B., B.S. Parts I and II taken together, for purchase of books and appliances.

PATNA UNIVERSITY LIBRARY

Total number of books in the Library in 1956-57 was 76,243 of which 5,080 books were added during the year.

MANUSCRIPTS SECTION

In 1956-57 the Manuscript Section contained 523 manuscripts in Sanskrit and Hindi and 117 manuscripts in Persian and Urdu.

PERIODICALS

Number of Newspapers, Periodicals and Journals received during 1956-57 was 545 (310 subscribed comprising of 232 Foreign and 78 Indian, and 235 received free).

PUBLICATION AND EXTENSION WORK

The lectures of the University Readers are published by the University at its own cost. The following lectures have so far been published and are available for sale :

1. The Moghul Administration (First Series) by Sir J. N. Sarkar.
2. Principles and Methods of Physical Anthropology by Shri Sarat Chandra Roy.
3. The Indian Fiscal Problem by Sir J. C. Goyajee, Kt.
4. The Buddhistic Philosophy of the Theraveda School, as embodied in the Pali Abhidharama by N. K. Bhagwat.
5. The Place of Partial Differential Equations in Mathematical Physics by Dr. Ganesh Prasad.
6. The Moghul Administration (Second Series) by Sir J. N. Sarkar.
7. Nadir Shah in India by Sir J. N. Sarkar.
8. Recent Investigation Concerning the Constitution of Matter by Dr. E. P. Harrison.

- *9. The Glories of Magadha by Mr. J. N. Samaddar.
10. The Main Currents of Maratha History by Mr. G. S. Sardesi.
11. Comparative Colonial Policy by Dr. V. S. Ram.
12. The Rural Economy of India by Dr. R. K. Mukherji.
13. Magadhan Literature by Mahamahopadhyaya H. P. Sastri.
14. Early Inscriptions of Bihar and Orissa by Dr. A. P. Banerji Sastri.
15. Some Aspects of Fiscal Reconstruction in India by Dr. Gyan Chand.
16. Educational Ideas and Institutions in Ancient India by Dr. S. C. Sarkar.
17. The Value of Scientific and Institutive Thought in the Advancement of Modern Medicine by Dr. E. W. H. Cruickshank.
18. Language in Education by Dr. M. P. West.
19. Economics of Protection in India by Dr. V. G. Kale.
20. Atomic Physics by Dr. Meghnad Saha.
21. India and the International Labour Organisation by Dr. P. P. Pillai.
22. Hindu Law in its Sources by Dr. Ganganath Jha.
23. Indian Banking with special reference to Bihar and Orissa by Sir John A. Hubback, Kt.
24. The Medical and Economic Aspects of some Indian Medicinal Plants by Lt. Col. R. N. Chopra.
25. New Conceptions in Bio-Chemistry by Dr. N. R. Dhar.
26. High Temperature Flames and their Thermodynamics by Dr. H. K. Sen.
27. Bihar and Orissa during the Fall of the Moghul Empire by Sir J. N. Sarkar.
28. Some Aspects of the Census Operations of 1931 in Bihar and Orissa by Mr. W. G. Lacey, I.C.S.
29. Federal Finance in India by Prof. K. T. Shah.
30. Contribution of Hindi Literature to Indian History by Rai Bahadur Sukhdeo Bihari Misra.
31. The Origin and Growth of the Hindi Language and its Literature by Pt. Ayodhya Singh Upadhyaya.
32. Introduction to the Bio-Chemistry of Nitrogen Conservation by Dr. Gilbert J. Fowler.
33. Tuhfa-i-Sami Edited by Dr. Iqbal Hussain.
34. Some Aspects of Roman Law by Dr. James Mackintosh.
35. Lectures on Shakespeare by Mr. J. A. Chapman.

* Note :—The books marked with an asterisk are out of stock.

36. The early Persian Poets of India by Dr. Iqbal Hussain.
- *37. The Psychological Attitude of Early Buddhist Philosophy by Rev. Anagarika Brahmachari Govinda.
38. Federal Finance by Mr. Mannu Subedar.
39. Wave Mechanics by Dr. V. V. Narlikar.
- *40. Regulation of Wages and other problems of Industrial Labour in India by Dr. D. R. Gadgil.
41. Development of Basic Chemical Industries in Bihar by Mr. Phuldeo Sahay Verma.
- *42. Financial Burden of the War on India by Mr. C. N. Vakil.
43. Problems of India's Constitution by Prof. A. B. Rudra.
- *44. Indian Economy During the War by Dr. L. C. Jain.
45. Economic Policy and Programme for Post-War India by Shri N. R. Sarkar.
46. Modern Development in the Chemistry of Boron by Dr. R. C. Ray.
47. The Dutch in Bengal and Bihar by Dr. K. K. Dutta.
48. Economic Transition in the Bengal Presidency (1793-1833) by Dr. H. R. Ghosal.
49. Artha Vijnan by Dr. B. R. Saxena.
50. Some Aspects of the Population Problem of India by Dr. Gyan-chand.

RESIDENCE AND COST OF LIVING

The University controls the residence of students. The University provides accommodation for 2,729 students in its hostels. The rest of the students reside with their parents or guardians or have to make their own arrangements.

PROVISION FOR SAFEGUARDING HEALTH, MEDICAL INSPECTION, DISCIPLINE, ETC.

The University controls the residence, health and discipline of the students directly. The power of control is vested in the Principals of Colleges and Wardens of Hostels. The health-check-up of the students is arranged by the Board of Health and Residence. The University has a Central Dispensary, as also a branch of the same for providing medical facilities to the students and the staff of the University.

COURSES OF STUDY, EXAMINATIONS AND DEGREES

Admission to the University is open to those who have passed the Secondary School Examination of the Bihar Secondary School Examination Board or any other examination recognised by the University as equivalent thereto.

* Note :—The books marked with an asterisk are out of stock.

The University confers the degrees of B.A. (Pass and Honours), M.A., Ph.D., and D.Litt. in Arts; B.Sc. (Pass and Hons.), M.Sc., Ph.D. and D.Sc. in Science; B.Com., M.Com. and Ph.D. in Commerce. The professional degrees are: B.L., Master of Education and Ph.D. in Education; B.Sc. (Eng.), M.Sc. (Eng.) and Ph.D. Engineering; M.B., B.S., B.Sc. (Med. Sciences), M.Sc. (Med. Sciences), M.D., M.S., Ph.D. in Medicine.

Diplomas are awarded in Teaching, International Relations, Public Administration and in the subjects of Laryngology and Otology, Ophthalmology, Child Health, Anaesthesiology, Clinical Pathology, Gynaecology and Obstetrics and Tuberculosis Diseases in the Faculty of Medicine.

Certificates are awarded in Vocal and Instrumental Music.

ENTRANCE QUALIFICATION AND DURATION OF COURSES

<i>Name of examination.</i>	<i>Qualification for admission and duration of course.</i>
I.A., I.Sc. and I.Com.	A student who has passed the Matriculation Examination or any other examination equivalent thereto recognised by the University. A student for admission in the I.Sc. class must have offered Additional Mathematics. The courses extend over two academic years.
B.A.	A student who has passed the I.A. examination or any examination equivalent thereto recognised by the University. Students who have passed the I.Sc. examination are admitted provided they pass the qualifying examination in any Arts subject which they did not offer at the I.Sc. stage except Mathematics of the I.A. examination. The course extends over two academic years.
B.Sc.	A student who has passed the I.Sc. examination or any examination recognised by the University as equivalent thereto. The course extends over two academic years.
B.Com.	A student who has passed the I.Com. examination or any examination recognised by the University as equivalent thereto. The course extends over two academic years.

<i>Name of examination.</i>	<i>Qualification for admission and duration of course.</i>
I.Sc. (Engineering)	A student who has passed the I.Sc. examination or any examination recognised by the University as equivalent thereto with Physics, Chemistry and Mathematics as three of his subjects.
B.Sc (Eng.) Part I.	A student who has completed a regular course of study for not less than one academic year in those subjects which he offers after passing the I Sc. (Eng.) examination.
B Sc. (Eng.) Part II.	A student who has completed a regular course of study for not less than one academic year after passing the B.Sc. (Eng.) Part I examination.
M A.	A student who has passed the B.A. examination or any examination recognised by the University as equivalent thereto; a student who has passed the B.Sc. examination or any examination recognised by the University as equivalent thereto provided he passes the qualifying examination in English and Vernacular Composition of the B A. stage; and a student who has passed the B.Com. examination or any examination recognised by the University as equivalent thereto, is allowed to offer Economics only at the M A. examination. The course extends over two academic years.
M.Sc.	A student who has passed the B.Sc. examination or any examination recognised by the University as equivalent thereto. The course extends over two academic years.
M.Com.	A student who has passed the B.Com. examination or any examination recognised by the University as equivalent thereto. The course extends over two academic years.

Note :—If a student is studying either M A. or M.Sc. or M.Com. and has also joined Law or any Diploma course, he is not permitted to attend lectures for either of these courses during the second academic years of his study for M.A., M.Sc. or M.Com. examinations.

<i>Name of examination.</i>	<i>Qualification for admission and duration of course.</i>
Dip.-in-Ed.	A student who has passed B.A. or B.Sc. examination or an examination recognised by the Syndicate as equivalent thereto. The course of study extends over one academic year.
M.Ed.	A student who has passed Dip.-in-Ed. examination and has also passed a degree examination in the subject in which he proposes to specialise. The duration of the course is one academic year.
B.L.	A student who has passed the B.A. or B.Sc. examination or B.Com. examination or B.Sc. (Eng.) examination or any examination recognised by the University as equivalent thereto. The courses of study extend over two academic years.
M.L.	A student who has passed the B.L. examination or some other examination recognised by the Syndicate as equivalent thereto may be examined for the degree of Master of Law provided that none shall be allowed to appear at the examination unless two years have elapsed since the date of his passing the B.L. examination or any equivalent examination.
Doctor of Law.	Any Master of Law of the University of Patna, or of any other University who is permanently resident in the State of Bihar, may at any time after one year from the date on which he passed the examination for the degree of Master of Law, can offer himself for the degree of Doctor of Law.
M.B.,B.S.	A student who has passed one of the following examinations :— (i) The I.Sc. examination with Physics, Chemistry and Biology or some other examination recognised by the University as equivalent thereto.

Name of examination.

Qualification for admission and duration of course.

- (ii) The B.Sc. examination of a recognised University with Botany and Zoology in addition to having passed in Physics and Chemistry either at the Intermediate or degree examination.

M.S.

Any student who has passed the M.B., B.S. examination not less than three academic years before the date of the Master's examination may be examined for the degree of M.S. in the following subjects :—

1. General Surgery.
2. Ophthalmology.
3. Laryngology, Rhinology and Otology.
4. Gynaecology.

M.D.

Any student who has passed the M.B., B.S. examination not less than three academic years before the date of the Doctor's examination may be examined for the degree of M.D. in the following subjects :—

1. General Medicine.
2. Pathology.
3. Psychological Medicine.
4. Obstetric Medicine.
5. Preventive Medicine.
6. Tropical Medicine.
7. Forensic Medicine.
8. Children's Diseases.
9. Pharmacology and Therapeutics.
10. Physiology.

Diploma in

- (i) Laryngology & Otology.
- (ii) Ophthalmology.
- (iii) Child Health.
- (iv) Anaesthesiology.
- (v) Clinical Pathology.
- (vi) Obstetrics & Gynaecology.
- (vii) Tuberculosis Diseases.

The courses are open to graduates in Medicine of the Patna University or of any other University recognised for the purpose by the Academic Council of this University provided they have been in general practice for at least two years or have held resident appointment in a Hospital or in the ward of a teaching Hospital of the special subject concerned. The courses extend over one session.

<i>Name of examination.</i>	<i>Qualification for admission and duration of course.</i>
Diploma in International Relations and Public Administration.	Any student of the University who has passed the B.A or B.Sc. or B.Com. examination, or any other examination recognised by the University as equivalent thereto may be admitted to this examination. The courses extend over one academic year.
Certificate in Music (Vocal or Instrumental)	Any student can be admitted to the Certificate in Music class. The courses extend over three academic years.

COURSES OF STUDY (ARTS)

Intermediate Examination.

The course of study extends over two years subsequent to the admission to the University, and a candidate is required to study and to be examined in the following subjects:—

1. English : Three papers each carrying 100 marks.

Note :—The courses of studies for two papers in English shall be common to Intermediate Arts and Science but courses of studies for one paper in English shall be so framed as to suit the needs of Arts students.

2. (a) Hindi Composition : 50 marks : One paper.

- (b) Composition in one of the following Indian Languages :—
Hindi, Maithili, Urdu, Oriya, Nepali, Bengali and Alternative English : 50 marks.

Note :—The marks in Composition paper shall be 30 subject to the condition that every candidate must secure at least 15 marks in Hindi Composition.

- 3, 4 and 5. Three of the following optional subjects :—

- A. Each containing two papers and each paper carrying 100 marks.

- (a) One of the following Modern Languages :—

Hindi, French, Italian, German, Oriya, Bengali, Urdu, Maithili and Nepali.

- (b) One of the following classical languages :—

Sanskrit, Pali, Arabic, Persian, Greek and Latin.

- (c) History.

- (d) Logic.

- (e) Mathematics.

- (f) Civics.

- (g) Elementary Economics.
- (h) Domestic Science (for Women candidates only)
- (i) Geography.
- (j) Psychology.
- (k) Music.

B. Containing two theoretical papers each carrying 75 marks and one practical paper carrying 50 marks.

Provided that a candidate will have the choice of offering an extra-optional subject from the above list without attendance at lectures. He can appear if he so desires in the subject of General Knowledge and also at an optional viva voce examination in spoken English or Hindi or both.

In order to pass the Intermediate examination in Arts, a candidate must obtain—

30 per cent of the total marks in each subject (theoretical portion), with a minimum of 15 marks in Hindi Composition and 40 per cent of the total marks in each subject (practical portion) with 33 per cent in the aggregate

Candidates obtaining not less than 60 per cent, 45 per cent and 33 per cent of the aggregate marks shall be placed in the First, Second and Third Divisions respectively.

A candidate obtaining 75 per cent marks in any subject shall be declared to have passed with Distinction in that subject.

Bachelor of Arts (Pass and Honours).

The course extends over two years subsequent to the Intermediate examination. A candidate for the Degree is required to study and to be examined in—

(a) English: Three papers

(b) (i) Hindi Composition: 50 marks.

(ii) Composition in one of the following languages:—

Hindi, Maithili, Urdu, Oriya, Bengali, Nepali, or Alternative English: 50 marks: One paper.

Note :—The pass marks in Composition paper shall be 36 subject to the condition that every candidate must secure at least 18 marks in Hindi Composition.

(c) and (d) Two of the following subjects:—

(i) One of the following modern languages:—

Hindi, French, Italian, German, Oriya, Bengali, Maithili, Nepali and Urdu.

(ii) One of the following classical languages:—

Sanskrit, Pali (including a knowledge of Sanskrit up to the Secondary Examination standard), Arabic, Persian, Greek and Latin.

- (iii) History, (iv) Economics, (v) Political Science, (vi) Philosophy, (vii) Psychology, (viii) Mathematics, (ix) Geography, (x) Sociology, (xi) Domestic Science (for women candidates only), (xii) Ancient Indian History and Culture, (xiii) Principles of Law, (xiv) Statistics.

Provided that no candidate shall be allowed to take up Mathematics if he did not take up the subject at the Intermediate Examination.

The minimum for pass is $33\frac{1}{2}$ per cent in each subject (except in Vernacular Composition in which the minimum pass marks is 36 per cent) and 35 per cent in the aggregate.

Candidates obtaining not less than 60 per cent, 45 per cent and 35 per cent of the marks in the aggregate shall be placed in the First, Second and Third Divisions respectively.

To qualify for Honours in the subject selected a candidate must obtain 45 per cent in that subject: 60 per cent in the subject entitles a candidate to secure a First Class.

Master of Arts.

A candidate for this Degree should have studied for two years subsequent to graduation. One of the following subjects may be selected for study and examination:—

- (i) Hindi, (ii) Sanskrit, (iii) English, (iv) Arabic, (v) Persian, (vi) Philosophy, (vii) History, (viii) Economics, (ix) Political Science, (x) Mathematics, (xi) Urdu, (xii) Maithili, (xiii) Ancient Indian History and Culture, (xiv) Sociology, (xv) Psychology, (xvi) Statistics, (xvii) Geography, (xviii) Labour and Social Welfare, (xix) Bengali.

In the subjects mentioned in serial numbers (i) to (xiii) and (xix) there shall be eight papers of four hours' duration, each carrying 100 marks and there shall be a practical examination or dissertation or oral examination in the subjects mentioned in serial numbers (xiv) to (xviii).

In order to pass a candidate must obtain at least 36 per cent of the marks in the aggregate, provided that where a practical or oral examination or a dissertation is prescribed, he shall be required to secure at least 33 per cent of the marks in the aggregate of theoretical papers and 40 per cent of the marks (a) in the aggregate of oral examination, (b) in the aggregate of all Practical examinations taken together, and (c) in the aggregate of dissertation. Candidates obtaining 60 per cent of the aggregate marks or more shall be placed in the First Class, 45 per cent or more but less than 60 per cent of the aggregate marks in the Second Class and the remaining successful candidates in the Third Class.

Doctor of Philosophy (Ph.D.).

A Master of Arts who has obtained a First or a Second Class may offer himself as a candidate for the Ph.D. degree at any time not less than two academic years from the date of his taking the Master's degree.

Except in the case of a teacher of the University who has taught for five years in the University, or if he is so allowed, every candidate for the Ph.D. degree shall be required to work for not less than two academic years or six terms, as defined in the Regulations under the guidance of a teacher of the University.

Doctor of Literature (D. Litt.).

Candidates may be examined for the Doctor's degree in Literature or Science as follows :—

(1) Any Master of Arts of Science of the University of Patna, who was placed in either the First or Second class at the examination for the degree of Master, or any person who holds the degree of Ph.D. in Arts or Science of the University of Patna, may, at any time not less than five years in the case of the former and three years in the case of the latter from the date when he passed the examination for such degree, offer himself as a candidate for the degree of Doctor of Literature or Science, respectively.

(2) Any person, who holds the degree of Master of Arts or Science from another University, or a degree recognised by the Syndicate as equivalent thereto, may, if he was placed in either the First or the Second class at the examination for such degree, offer himself as a candidate for the degree of Doctor of Literature or Science respectively, provided that—

- (a) he is permanently resident in the Province of Bihar, and
- (b) not less than five years have elapsed since he passed the examination for such degree.

(3) Any person who holds the degree of Master of Arts or Science from the University of Patna, or from another University, or a degree recognised by the Syndicate as equivalent thereto, may at any time not less than five years after the date on which he passed the examination for such degree, offer himself as a candidate for the degree of Doctor of Literature or Science respectively, if for not less than three years he has worked in the province of Bihar as a University Professor, Assistant Professor or Reader, or as a member of the teaching staff of a College.

SCIENCE

Intermediate Examination.

The course extends over two years subsequent to the Matriculation examination. A candidate is required to study and to be examined in the following subjects :—

- (1) English : Three papers.
- (2) (a) Hindi Composition : 50 marks.
- (b) Composition in one of the following Indian languages :—
Hindi, Maithili, Urdu, Oriya, Nepali, Bengali and
Alternative English : 50 marks : One paper.

The pass marks in Composition paper shall be 30 subject to the condition that every candidate must secure at least 15 marks in Hindi Composition.

- (3) (a) Chemistry.
- (b) Physics.
- (c) One of the subjects mentioned in clause (4) below.
- (4) (i) Mathematics,
- (ii) Biology,
- (iii) Geology.

In order to pass the Intermediate examination in Science, a candidate must obtain—

30 per cent of the total marks in each subject (theoretical portion) with a minimum of 15 marks in Hindi Composition and 40 per cent of the total marks in each subject (practical portion) with 33 per cent marks in the aggregate.

Candidates obtaining not less than 60 per cent, 45 per cent and 33 per cent of the marks in the aggregate shall be placed in the First, Second and Third Divisions respectively.

Candidates obtaining 75 per cent marks in any subject or subjects shall be declared to have passed with Distinction in that subject or subjects.

Bachelor of Science (Pass and Honours).

The course extends over two years subsequent to the Intermediate examination. A candidate is required to study and to be examined in three of the following subjects :

- (i) Mathematics.
- (ii) Physics.
- (iii) Chemistry.
- (iv) Botany.
- (v) Zoology.
- (vi) Geology.
- (vii) Statistics.

There are two theoretical papers and practical examinations in each of these subjects except Mathematics in which there are only three papers.

Honours may be obtained by taking in addition to the pass paper in two of the subjects, four theoretical papers, and two practical examinations in one of the Science subjects or six papers in Mathematics.

The minimum for 1st Division, 2nd Division and 3rd Division in Pass course and 1st and 2nd Class in Honours is the same as for the B.A. except that each successful candidate must pass both in theoretical and practical portion of the examination.

A candidate must obtain—

(a) in order to pass in the Pass Course :

In Mathematics .. 100 marks

In other subjects .. 60 marks

in the theoretical papers, 40 marks in the practical examination.

(b) in order to qualify for Honours :

In Mathematics .. 270 marks

In any other subject .. 180 marks

in the theoretical papers, 90 marks in the practical examination.

If a candidate obtains 75 per cent marks in any subject (Pass or Honours) he shall be declared to have passed with Distinction in that subject.

Master of Science (M.Sc).

This Degree may be taken after two years of study subsequent to graduation in Science. A candidate is required to study and to be examined in one of the following subjects :—

- (i) Mathematics
- (ii) Chemistry
- (iii) Physics
- (iv) Botany
- (v) Zoology
- (vi) Geology
- (vii) Statistics
- (viii) Geography

There is a practical examination in all subjects other than Mathematics and candidates are required to pass both in practical portion of these subjects and in the theoretical portion.

In Mathematics there are eight papers each of four hours' duration and each carrying 100 marks. In Physics, Botany, Zoology and Geology there are five theoretical papers, each of four hours' duration and carrying 100 marks and three practical examination each carrying 100 marks.

In Chemistry there are four theoretical papers each of four hours' duration carrying 100 marks and four practical examinations each carrying 100 marks.

In Statistics there are six theoretical papers, each of four hours' duration and carrying 100 marks and two practical examinations each carrying 100 marks.

In order to pass a candidate must obtain at least 36 per cent of the marks in the aggregate, provided that where a practical examination is

prescribed, he is required to secure at least 33 per cent of the marks in the aggregate of theoretical papers and 40 per cent of the marks in the aggregate of all the practical papers taken together.

The minimum for First, Second or Third Class is the same as for the M.A. examination.

Doctor of Philosophy (Ph.D.).

The rules and the regulations are on the same lines as for the Ph.D. in Arts.

Doctor of Science (D.Sc.).

The rules and regulations are on the same lines as for the Doctor of Literature.

COMMERCE

Intermediate examination in Commerce.

The course of study extends over two years subsequent to the Bihar Secondary School Examination. A candidate is required to study and to be examined in the following subjects:—

Compulsory :

- (1) Elementary Economics and Commercial Geography.
- (2) Business Method and Office Organisation and Commercial Correspondance and Salesmanship.
- (3) Book-keeping and Commercial Arithmetic.
- (4) Modern English including an oral examination.
- (5) Composition in a Vernacular.

Optional :

Any two of the following :

- (1) Mathematics, (2) Shorthand and Typewriting, (3) Economic History, (4) Theory and Practice of Banking in India, (5) Insurance, (6) Civics.

In order to pass the Intermediate examination in Commerce a candidate must obtain 20 marks in each of the compulsory and optional subjects with a total of 60 marks in each group and 50 marks in English subject to condition that 15 marks must be obtained by him in the oral examination in English; 15 marks on composition in Indian Languages provided he must obtain at least 8 marks in Hindi Composition; 12 marks in written paper and 24 marks in the practical examination in shorthand and typewriting and 33 per cent marks in the aggregate.

The minimum marks for First, Second or Third Division is the same as for the Intermediate examination in Arts.

Bachelor in Commerce :

The course of study extends over two years subsequent to the admission to the I.Com. examination. A candidate is required to study and to be examined in the following subjects:—

Compulsory :

(1) English, (2) Economics and Money and Banking, (3) Business Organisation and Administration and Economic Development of specific countries, (4) Book-keeping and Accounting and Commercial Law.

Optional :

One of the following subjects or groups of subjects:—

(a) Economic Geography, (b) Advance Accounting and Auditing and Cost Accounting, (c) Actuarial Science, Insurance and Insurance Laws, (d) Currency and Advanced Banking, (e) Statistical Method and Applied Statistics, (f) Indian Administration and Public Finance, (g) General Economics Co-operative Banking in India, (h) Trade, Tariff and Transport, (i) Industrial Development of India.

The two theoretical papers in English are of three hours' duration each and carry 75 marks each and the oral examination carries 50 marks. Other theoretical papers are of three hours' duration, carrying 100 marks each.

In order to pass the Bachelor Examination in Commerce a candidate must obtain 20 marks in each paper with a total of 60 marks in each group and 66 marks in English, subject to the condition that 15 marks must be obtained by him in the oral examination in English and 35 marks in the aggregate.

The minimum marks for First, Second, or Third Division is the same as for the B.A. examination.

If a candidate obtains 75 per cent marks in any subject, he is declared to have passed with Distinction in that subject.

Master of Commerce :

The courses of study extend over two years subsequent to B.Com. examination. A candidate is required to study and to be examined in the following subjects:—

(i) Applied Economics	..	One paper	100 marks
(ii) Organisation of Major Industries in India	..	—do—	—do—
(iii) Business Administration	..	—do—	—do—
(iv) Public Economics	..	—do—	—do—

Optional :

			200 marks
(i) International Banking Problems	..	Two papers	(each carrying 100 marks)
(ii) Advance Accounting Problems	..	—do—	—do—
(iii) Actuarial Science	..	—do—	—do—
(iv) Labour Organisation, Management and Welfare	..	—do—	—do—
(v) International Trade and Foreign Exchange	..	—do—	—do—
(vi) Statistical Methods	..	—do—	—do—
(vii) Transport	..	—do—	—do—
(viii) Practical Training	..	—do—	—do—

There is also a *viva voce* examination for all the candidates carrying 50 marks.

In order to pass a candidate must obtain 20 marks in the *viva voce* examination and 288 marks in the aggregate, provided he obtains 80 marks in the practical examination.

PROFESSIONAL COURSES OF STUDY AND EXAMINATIONS

Law :

BACHELOR OF LAW (B.L.).

The course is open to graduates and extends over two years.

The subjects for study are as follows:—

Law examinations, Part I :

Compulsory :

(1) Jurisprudence and Theory and Principles of Legislation, (2) Hindu Law and Mohammadan Law excepting succession in Mohammadan Law, (3) Indian Penal Code and the Criminal Procedure Code, and (4) Indian Contract and the Law of Torts.

Optional :

Any one of the following subjects:

- (i) Maine's Ancient Law and Roman Law.
- (ii) Parts of the following Acts:
 - (a) Indian Companies Act,
 - (b) Indian Partnership Act,
 - (c) Negotiable Instruments Act,
 - (d) Indian Sales of Goods Act.
- (iii) Constitutional Law, British and Indian.
- (iv) Public International Law.

*Law Examination, Part II :**Compulsory :*

- (i) Indian Evidence Act and the Indian Limitation Act, excluding the Articles,
- (ii) Transfer of Property Act and selected Sections of the Indian Succession Act and Indian Registration Act,
- (iii) Civil Procedure Code, Indian Arbitration Act and Provincial Small Cause Courts Act,
- (iv) Bihar Tenancy Act or Chotanagpur Tenancy Act and Reg. XI of 1925.

Optional :

Any one of the following subjects :—

- (a) The Principles of Equity including the Indian Trusts Act and the Specific Relief Act,
- (b) Private International Law,
- (c) Pleading, Conveyancing and drafting,
- (d) Indian Income Tax Act, Bihar Agriculture Income Tax Act and Bihar Sales Tax Act.
- (e) The Indian Factories Act, the Workmen's Compensation Act, the Industrial Dispute Act and the Indian Trade Union Act.

Law (Honours) Examination, Part I :

Paper VI—Constitutional Law.

Paper VII—Any one of the following subjects :

- (a) Jurisprudence and Theory and Principles of Legislation,
- (b) Hindu Law,
- (c) Law of Contract and Law of Torts.

Law (Honours) Examination, Part II :

Paper VI—Private International Law.

Paper VII—Any one of the following subjects :

- (a) Land Laws of Bihar and Bengal,
- (b) Transfer of Property Act,
- (c) Indian Evidence Act.

To pass the Law Examination, Part I, a candidate must obtain 33 per cent in each paper and 49 per cent in the aggregate. Candidates obtaining $66\frac{2}{3}$ per cent are placed in the First Class.

In order to pass Law Examination, Part II, a candidate must obtain 33 per cent in each paper and 49 per cent in the aggregate of Part I and Part II Examinations taken together. To obtain a First Class the candidate must obtain $66\frac{2}{3}$ per cent of the marks of the Law Examinations, Parts I and II put together.

In order to secure First Class at the Bachelor of Law (Honours) Examination, Part I :

- in each paper — 33 marks
- in the aggregate — 467 marks.

In order to secure a Second Class at the Bachelor of Law (Honours) Examination, Part I :

- in each paper — 33 marks
- in the aggregate — 350 marks.

In order to secure a First Class at the Bachelor of Law (Honours) Examinations, Part I and Part II taken together :

- in each paper — 33 marks
- in the aggregate — 934 marks.

In order to secure a Second Class at the Bachelor of Law (Honours) Examination, Parts I and II taken together :

- in each paper — 33 marks
- in the aggregate — 700 marks.

MASTER OF LAW (M.L.)

Any registered candidate, who has passed the Bachelor of Law examination may be examined for the degree of Master of Law provided two years have elapsed since the date of his passing the Bachelor of Law Examination.

The subjects of study are :—(i) Hindu Law or Mohammadan Law, (ii) Jurisprudence and the Principles of Legislation, (iii) The Principles and History of Roman Law, (iv) Private International Law.

Optional :

Any two of the following subjects :

- (i) The principles of Equity
- (ii) The Law relating to the transfer of immovable property and the Law of Prescription.
- (iii) The Law relating to Wills.
- (iv) The Law of Contracts and the Law of Torts.
- (v) The Principles and History of the Law of Real and Personal Property.
- (vi) The Principles and History of the Law of Evidence.
- (vii) The History of English Law.

The examiner of any paper may, if he thinks fit, require a candidate to submit to an oral examination on that paper and the result of any such oral examination shall be taken into consideration by the examiner in finally assigning the marks in that paper.

In order to pass the examination for the degree of Master of Law, a candidate must obtain in each paper, 50 marks.

In order to be placed in the First Class, a candidate must further obtain in the aggregate 400 marks.

DEGREE OF DOCTOR OF LAW

The rules and regulations are the same as for the Ph.D.

EDUCATION

Diploma in Education Examination :

(1) Any registered candidate may be admitted to the examination for the Diploma-in-Education not less than one year after passing the B.A. or B.Sc. examination, or an examination recognised by the Academic Council as equivalent thereto, if he has completed a regular course of study in a training college or colleges admitted for this purpose and has undergone a course of practical training in one or more schools approved for the purpose.

(2) A candidate, who has been sent up for the Diploma-in-Education examination but who has either failed to present himself or to pass, may be admitted to the two subsequent examinations without further attendance at the college.

The courses of study comprise the following subjects :

(1) The courses of study shall extend over one academic year and shall comprise the following subjects :—

- (i) Comparative Education and History of Educational Thought and Practice.
- (ii) Educational Psychology ; Educational Measurement and Guidance.
- (iii) Either Methods of Teaching two Secondary School subjects and one craft or subjects of the Primary School curriculum and one craft.
- (iv) Educational Administration and Social and Health Education.
- (v) Principles of Education, Educational Sociology.
- (vi) Practical Teaching.
- (vii) Preparation of Teaching Aids.
- (viii) Training in Community Life Activities.

In order to pass the Diploma-in-Education examination a candidate must obtain 36 marks in each theoretical subjects and 120 marks in the practical examination.

Third Division	Less than 45% marks in the aggregate.
Second Division	Not less than 45% marks in the aggregate.
First Division	Not less than 60% marks in the aggregate.
First Class	
with Distinction	Not less than 75% marks in the aggregate.

Master of Education (M.Ed.)

The examination is open to candidates one year after passing the Diploma in Education Examination.

The courses of study comprise the following subjects:—

(a) Theoretical—

- (i) Philosophy of Education,
- (ii) Educational Psychology,
- (iii) Methods of Teaching a Special subject,
- (iv) History of Education,
- (v) Intensive study of a special educational problem,
- (vi) Educational Measurements, and

(b) Practical—

- (vii) Educational Investigation,
- (viii) Teaching.

In the theoretical portion of the examination there shall be six papers each of four hours' duration carrying 100 marks, namely, one paper in each of the subjects (i) to (vi) mentioned above.

In order to pass the Master of Education examination a candidate must obtain 216 marks in the aggregate of the six theoretical papers and 40 marks in each of the two practical papers. Candidates who obtain 360 marks shall be placed in the Second Class and candidates who obtain 480 marks shall be placed in the First Class.

ENGINEERING

Intermediate examination in Science (Engineering).

Any registered student may be admitted (i) to the Intermediate examination in Science (Engineering) Part I if he has completed a regular course of study for not less than one year after passing the Intermediate examination in Science, (ii) to the Intermediate examination in Science (Eng.) Part II if he has completed a regular course of study for not less than one year after passing the Intermediate examination in Science (Eng.) Part I.

The subjects of study and examinations are as follows :—

Intermediate examination in Science (Eng.) Part I :

(a) Every candidate shall be examined in the following groups of subjects :—

Group I	—	1. Engineering Physics	3 hours.
		2. Engineering Materials	3 hours.
Group II	—	1. Mathematics Paper I	3 hours.
		2. Mathematics Paper II	3 hours.
Group III	—	1. Applied Mechanics Paper I	3 hours.
		2. Surveying Paper I	3 hours.
Group IV	—	1. Civil Engineering Drawing Paper I	4 hours.
		2. Geometrical Drawing	4 hours.
		3. Machine Drawing Paper I	4 hours.
Group V	—	1. Laboratory Records	Sessional.
		2. Field Survey	Sessional.
		3. Workshop	Sessional.

Intermediate examination in Science (Eng.) Part II :

(b) Every candidate shall be examined in the following groups of subjects :—

Group I	—	1. Mathematics Paper III	3 hours.
		2. Applied Mechanics Paper II	3 hours.
Group II	—	1. Elementary Mechanical Engineering	3 hours.
		2. Elementary Electrical Engineering	3 hours.
Group III	—	1. Building Construction	3 hours.
		2. Surveying Paper II	3 hours.
Group IV	—	1. Graphic Statics	4 hours.
		2. Estimating	4 hours.
Group V	—	1. Civil Engineering Drawing Paper II	4 hours.
		2. Machine Drawing Paper II	4 hours.
Group VI	—	1. Surveying Practical	6 hours.
		2. Workshop Practical	6 hours.
Group VII	—	1. Survey Records	Sessional.
		2. Civil Engineering Drawing	Sessional.
		3. Workshop	Sessional.
		4. Machine Drawing	Sessional.
		5. Laboratory Records	Sessional.

In order to pass the Intermediate examination in Science (Eng.) Part I and Part II, a candidate must obtain 35% of the total marks in each group of theoretical papers and 50% of the total marks in each group of practical examination and in each group of sessional work and 40% in the aggregate.

First Class	65% marks in the aggregate.
Second Class	55% marks in the aggregate.
Third Class	40% marks in the aggregate.

Bachelor of Science (Eng.).

Any registered student may be admitted (i) to the Bachelor of Science (Eng.) Examination Part I if he has completed a regular course of study for not less than one academic year after passing the I.Sc. (Eng.) Examination Part II and (ii) to the Bachelor of Science (Eng.) Part II Examination if he has completed a regular course of study for not less than one academic year after passing the B.Sc. (Eng.) Part I Examination.

A candidate for B.Sc. (Eng.) Examination Part I or II examination is examined in any of the following branches :

- (i) Civil Engineering.
- (ii) Electrical Engineering.
- (iii) Mechanical Engineering.

The subjects of study and examination are as follows :

Groups common to all branches :

Group I	—	1. Strength of Materials	3 hours.
		2. Theory of Structures Paper I	3 hours.
Group II	—	1. Hydraulics	3 hours.
		2. Mathematics Paper IV	3 hours.
Group III	—	1. Electrical Laboratory Records	Sessional.
		2. Heat Engine Laboratory Records	Sessional.
		3. Hydraulics and Material Testing Laboratory	Sessional.

(1) Civil Engineering :

Group IV	—	1. Humanities, Engineering Economics and Accounts	3 hours.
		2. Structural Design Paper I	6 hours.
Group V	—	1. Soil Mechanics	3 hours.
		2. Surveying Paper III	3 hours.
Group VI	—	1. Electrical Technology Paper I	3 hours.
		2. Mechanical Technology Paper I	3 hours.
Group VII	—	1. Field Survey	Sessional.
		2. Soil Mechanics Laboratory	Sessional.

(2) Electrical Engineering :

Group IV	—	1. Humanities, Engineering Economics and Accounts	3 hours.
		2. Electrical Design Paper I	6 hours.
Group V	—	1. Electrical Technology Paper II	3 hours.
		2. Electrical Machines Paper I	3 hours.
Group VI	—	1. Electrical Communication Paper I	3 hours.
		2. Mechanical Technology Paper I	3 hours.
Group VII	—	1. Electrical Design	Sessional.
		2. Workshop	Sessional.

(3) Mechanical Engineering :

Group IV	—	1. Humanities, Engineering Economics and Accounts	3 hours.
		2. Mechanical Design Paper I	6 hours.
Group V	—	1. Mechanical Technology Paper II	3 hours.
		2. Heat Engines Paper I	3 hours.
Group VI	—	1. Theory of Machines	3 hours.
		2. Electrical Technology Paper I	3 hours.
Group VII	—	1. Mechanical Design	Sessional.
		2. Workshop	Sessional.

(b) The B.Sc. (Engineering) Part II examination shall consist of the following subjects :

(1) Civil Engineering :

Group I	—	1. Theory of Structures Paper II	3 hours.
		2. Theory of Structures Paper III	3 hours.
Group II	—	1. Municipal Engineering Paper I (Water Supply and Sanitary Engineering)	3 hours.
		2. Town Planning and Architecture	3 hours.
Group III	—	1. Hydraulic Engineering Paper I (Irrigation and River Training)	3 hours.
		2. Hydraulic Engineering Paper II (Water Power Engineering)	3 hours.
Group IV	—	1. Land Communication Paper I (Earthwork, Roads, Bridges, Railway and Aerodromes)	3 hours.
		2. Estimating and Specifications	3 hours.

Group V	—	1. Structural Design Paper II	6 hours.
		2. Elective Subject	3 hours.
Group VI	—	1. Structural Design	Sessional.
		2. Hydraulics and Material Testing Laboratory Record	Sessional.
		3. Civil Engineering Project	Sessional.

(2) Electrical Engineering :

Group I	—	1. Electrical Measurement and Measuring Instruments	3 hours.
		2. Electrical Communication Paper II	3 hours.
Group II	—	1. Electrical Power System Paper I	3 hours.
		2. Electrical Power System Paper II	3 hours.
Group III	—	1. Hydraulic Machines	3 hours.
		2. Traction and Utilisation	3 hours.
Group IV	—	1. Electrical Machines Paper II	3 hours.
		2. Electrical Design Paper II	6 hours.
Group V	—	1. Works Management	3 hours.
		2. Elective Subject	3 hours.
Group VI	—	1. Electrical Design	Sessional.
		2. Communication Laboratory	Sessional.
		3. Electrical Laboratory	Sessional.

(3) Mechanical Engineering :

Group I	—	1. Theory of Structures Paper II	3 hours.
		2. Mechanical Land Transport	3 hours.
Group II	—	1. Heat Engines Paper II	3 hours.
		2. Heat Engines Paper III	3 hours.
Group III	—	1. Hydraulic Machines	3 hours.
		2. Workshop Technology	3 hours.
Group IV	—	1. Works Management	3 hours.
		2. Elective Subject	3 hours.
Group V	—	1. Mechanical Design Paper II	6 hours.
		2. Structural Design Paper III	6 hours.
Group VI	—	1. Heat Engine Laboratory	Sessional.
		2. Mechanical Design	Sessional.
		3. Structural Design	Sessional.

Elective subject referred to in Group V (Civil & Electrical) and Group IV (Mechanical) shall be selected from a list of subjects to be approved by the Academic Council from time to time.

There is one paper in each of the subjects under each group and carries 100 marks.

In order to pass the B.Sc. (Eng.) Examination Part I and Part II a candidate must obtain 40 per cent of the marks in each group of theoretical papers, 60 per cent of the marks in each group of practical examinations and in each group of Sessional Works and 50 per cent in the aggregate provided that in each theoretical paper he gets at least 20 per cent of the total marks for that paper and in each practical examination or each Sessional Works at least 30 per cent of the total marks of that examination or work.

(1) In order to be placed in the First Class in the B.Sc. (Eng.) Examination Part I, a candidate must obtain 70 per cent marks, and in order to be placed in the Second Class, 60 per cent marks. Candidates who pass but obtain less than 60 per cent marks will be placed in the Third Class.

(2) In order to qualify for Honours in the B.Sc. (Eng.) Examination Part II, a candidate must pass in all the groups of both the examinations Part I and II and obtain 60 per cent marks in the aggregate of both the parts taken together. If a candidate who has qualified for Honours obtains 70 per cent marks in the aggregate, he shall be declared to have passed the examination with First Class Honours, but if he obtains less than 70 per cent marks he shall be declared to have passed the examination with Second Class Honours.

(3) Candidates who obtain 80 per cent marks or above in the aggregate of Parts I and II taken together will be declared to have passed with First Class Honours and Distinction.

Master of Science Examination in Engineering.

Any person may offer himself as a candidate for the M.Sc. Degree in Engineering—

- (i) If he holds the Bachelor's degree in Science (Eng.) or in Civil Engineering of the Patna University and if not less than two years have elapsed since he passed the examination for such degree, or
- (ii) if he holds the Bachelor's degree in Engineering of any other University which is recognised by the Academic Council of the Patna University as equivalent to the B.Sc. (Eng.) Degree of the Patna University, if not less than two years have elapsed since he passed the examination for such degree.

The M.Sc. Examination in Engineering shall consist of:

- (i) Written examination comprising four papers of three hours' duration each, two of 100 marks each on the main subject of the study and two of one hundred marks each on two auxiliary subjects to be chosen by the candidate from the list approved by the Academic Council from time to time,

(ii) examination of thesis and oral test, the thesis to be submitted by the candidate after the lapse of at least two academic sessions after the date of registration,

Provided that a teacher of the University in the Faculty of Engineering of at least two years' standing shall be entitled to exemption, from the written examination in the two auxiliary subjects, but shall not be eligible to submit his thesis until he has been a teacher of three years' standing.

MEDICINE

First M.B.,B.S. Examination.

(a) A registered student of the University may be admitted to the First M.B.,B.S. examination if he has, subsequently to his passing one of the following examinations, completed a regular course of study, theoretical and practical, in the subjects of the examination for not less than two academic years in a College of the University admitted up to the standard of the First M.B.,B.S. examination :—

(i) The I.Sc. examination of the Patna University with Physics, Chemistry and Biology, or any other examination recognised by the Academic Council, as equivalent thereto for the purpose of this Regulation ;

(ii) The B.Sc. examination of the Patna University or a recognised University with Botany and Zoology, in addition to having passed in Physics and Chemistry either at the Intermediate or degree examination.

(b) A candidate who has not passed the I.Sc. or the B.Sc. examination with Organic Chemistry as a part of Chemistry, shall be required to pass in Organic Chemistry as a part of Physiology.

The courses of study shall include :—

Human Anatomy and Physiology.

These subjects shall include—

- (a) Dissection of the entire body ;
- (b) Elements of Human Embryology ;
- (c) Histology ;
- (d) The Principles of general Physiology including Bio-Chemistry and Bio-Physics and Organic Chemistry in case the subject has not been studied ;
- (e) Principles of Genetics ;
- (f) Elements of the methods of Clinical Examination including the use of the common instruments and the examination of body fluids, with demonstration on both normal and abnormal living subjects ; and
- (g) An introduction to Pharmacology.

Note :—The demonstration of structure and function in the teaching of Anatomy and Physiology shall be done, so far as possible on the living human subjects, and shall include the information to be obtained from Radiology.

Every candidate shall be examined in the following subjects :—

- (i) Anatomy ;
- (ii) Physiology, including Organic Chemistry for those who have not studied the subject.

Second M.B.,B.S. Examination.

A registered student of the University may be admitted—

- (a) to the Second M.B.,B.S. examination, if he has
 - (i) passed the First M.B.,B.S. examination, at least one and a half academic years previously ; and
 - (ii) subsequently to his passing the examination mentioned in sub-clause (i), completed in regular course of study, theoretical and practical, in the subjects of the examinations in a College of the University up to the Second M.B.,B.S. examination and has attended clinical instruction in a hospital during the period.

The courses of study for the Second M.B.,B.S. examination shall include—

- (i) Pharmacology including Pharmaco-therapeutics and Toxicology ;
- (ii) Forensic Medicine and Medico-legal Toxicology.

This subject should include instruction in the duties which devolve upon practitioners in their relations to the State and on the generally recognised rules of medical ethics.

Note :—Each student shall be required to attend Medico-legal post-mortems in at least ten cases.

- (iii) Pathology and Bacteriology—course of instruction to include—
 - (a) General and special Pathology and Morbind Anatomy,
 - (b) Clinical and Chemical Pathology,
 - (c) Elementary General Bacteriology and Parasitology,
 - (d) Clinical Bacteriology and Parasitology,
 - (e) Immunology and Immunization.

Note :—Each student should be required to have received practical instruction in the conduct of Autopsies, and to have acted as a post-mortem clerk in at least ten cases.

Final M.B.,B.S. Examination.

A registered student may be admitted to the Final M.B.,B.S. examination, if he has—

(i) passed the First M.B.,B.S. examination at least three years previously ;

(ii) passed the Second M.B.,B.S. examination at least one year previously ; and

(iii) subsequently to his passing the examination mentioned in sub-clause (i) completed a regular course of study, theoretical and practical in the subjects of the examination in a College of the University up to the standard of the Final M.B.,B.S. examination and has attended clinical instruction in a hospital during the period.

The courses of study for the Final M.B.,B.S. examination shall include—

(i) Medicine, including—

(a) a course of systematic instruction in the principles of Medicine including Pediatrics ;

(b) a medical clinical clerkship for a period of nine months, of which six months must be spent in the hospital wards and three months in the out-patient departments ;

*Note:—*Each student during his period of clinical clerkship in the ward should have continuously in his sole charge as clerk not less than five beds.

(c) a clinical clerkship for not less than one month in a Children's ward or hospital or in a Children out-patient department ;

(d) during the period of medical ward clerkship a continuous period of one month as an intern clerk during which the student is in residence in hospital or close by ;

(e) lectures or demonstration in clinical medicine and attendance on general in-patient and out-patient practice during at least two years which may run concurrently with the surgical practice ;

(f) instruction in Therapeutics and prescribing including—

(i) Pharmacological Therapeutics,

(ii) the method of treatment by vaccines and sera,

(iii) Physio-therapy,

(iv) the principles of nursing ;

(g) instruction in Applied Anatomy and Physiology throughout the period of clinical studies ;

- (h) instruction throughout the period of medical clerkship in clinical pathology including theory and practice of immunisation ;
and
- (i) attendance at each of the following departments for a period of fifteen days out of which not more than six shall be for lecture demonstration—
 - (a) acute infectious diseases,
 - (b) tuberculosis,
 - (c) psychological medicine and psychiatry,
 - (d) diseases of the skin,
 - (e) Leprosy,
 - (f) radiology and electro-therapeutics in their application to medicine,
 - (g) dietetics and principles of nursing,
 - (h) Physiotherapy.

Instruction in the subjects (a) to (h) may run concurrently with course of Instruction in medicine.

Note:—Throughout the whole period of study the attention of the students should be directed by the teachers of this subject to the importance of its preventive aspects.

(ii) Surgery, including—

- (a) a course of systematic instruction in the principles and practice of Surgery ;
- (b) a surgical dressership for a period of nine months, of which six months must be spent in the hospital wards and three months in the out-patient department ;
- (c) during the period of surgical dressership, a continuous period of one month as intern clerk during which the student is in residence in hospital or close by ;
- (d) lecture demonstration in clinical surgery and attendance on general in-patient and out-patient practice during at least two years which may run concurrently with the medical practice ;
- (e) practical instruction in surgical methods including Physiotherapy ;
- (f) practical instruction in minor surgery on the living ;
- (g) instruction in the administration of anaesthetics ;
- (h) a course of instruction in operative surgery ;
- (i) instruction, throughout the period of surgical dressership, in clinical studies ;

- (j) attendance at each of the following departments for a period of fifteen days out of which not more than six shall be for lecture demonstrations—
- (a) radiology and electro-therapeutics in their application to Surgery,
 - (b) venereal diseases,
 - (c) orthopaedics,
 - (d) dental diseases,
 - (e) surgical diseases of infancy and childhood, and
 - (f) anaesthesiology.
- (iii) Midwifery, Diseases of Women and Infant Hygiene, including—
- (a) a course of systematic instruction in the principles and practice of Midwifery, Gynaecology and Infant Hygiene, including Applied Anatomy and Physiology of Pregnancy and Labour ;
 - (b) lectures, demonstrations in clinical Midwifery, Gynaecology and Infant Hygiene, and attendance on the practice of maternity hospital or the maternity wards of a general hospital including (a) ante-natal care and (b) the management of the puerperim, and on in-patient Gynaecological practice for a period of at least three months. This period should be devoted exclusively to instruction in these subjects and should be subsequent to the medical clinical clerkship. Not less than two-third of the hours of clinical instruction should be given to Midwifery including ante-natal care and Infant Hygiene.

REGULATIONS REGARDING THE DIPLOMA EXAMINATIONS IN THE FACULTY OF MEDICINE

***Diploma in Tuberculous
Diseases (D.T.D.) :***

1. The course of study includes the following :—
 - (a) Etiology, Pathology and Bacteriology of Tuberculosis,
 - (b) Immunity,
 - (c) Anatomy and Physiology of the respiratory tract,
 - (d) Tuberculosis of other organs :—
 - Glands, Bones, Joints, G. I. tract,
 - Urogenital tract, Eye, Ear, Nose and Throat, Nervous System and Skin.
 - (e) Radiology in Tuberculosis,
 - (f) History of Tuberculosis, Epidemiology of Tuberculosis,
 - (g) Diagnosis and differential diagnosis, Prognosis of Tuberculosis,

- (h) Complications of Tuberculosis,
 - (i) Treatment of Tuberculosis,
 - (j) Practical Pathology and Bacteriology of tuberculous diseases.
2. On completion of the course, there shall be an examination consisting of written, oral, clinical and practical tests conducted by a Board of Examiners.
3. There shall be three written papers, each of three hours' duration, namely—
 Paper I—Anatomy, Physiology, Pathology and Bacteriology.
 Paper II—Pulmonary Tuberculosis.
 Paper III—Non-Pulmonary Tuberculosis and Epidemiology of Tuberculosis.

There shall be a clinical examination in Tuberculosis, a practical examination in Pathology and Bacteriology of tuberculous diseases and an oral examination covering the whole course.

4. Full marks for the examination shall be :—
- | | |
|-----------|--------------|
| Written | .. 300 marks |
| Oral | .. 50 marks |
| Practical | .. 50 marks |
| Clinical | .. 100 marks |

Pass marks shall be 50 per cent in written and oral together, and 50 per cent in practical and 50 per cent in clinical.

*Diploma in Child
Health (D.C.H.) :*

1. The course of study includes the following :—
- (a) Anatomy and Physiology of infancy and childhood,
 - (b) Pathology and Bacteriology of diseases of infancy and childhood,
 - (c) Development of the child, physical and mental,
 - (d) Hygiene, Dietetics and Psychology of infancy and childhood,
 - (e) Affections of the new-born and management of premature babies,
 - (f) Diseases of infancy and childhood.

- (g) Therapeutics of the diseases of infancy and childhood including remedial treatment, physical and mental,
 - (h) Management of child welfare centres, nurseries and creche, School Medical service and child Guidance clinics.
2. On completion of the course, there shall be an examination consisting of written, oral, clinical and practical tests conducted by a Board of Examiners.
 3. There shall be three written papers each of three hours' duration, namely—
 - Paper I—Applied Anatomy, Physiology, Pathology and Bacteriology of diseases of infancy and childhood.
 - Paper II—Diseases of children and their management.
 - Paper III—Development of Children, Child Hygiene, Infant Welfare and Creche, Dietetics and Child Psychology.

The oral, clinical and practical examinations shall cover the entire course.

4. Full marks for the examinations shall be :—

Written	..	300 marks
Oral	..	50 marks
Practical	..	50 marks
Clinical	..	100 marks

Pass marks shall be 50 per cent in written and oral together, and 50 per cent in practical and 50 per cent in clinical.

Diploma in Ophthalmology (D.O.) :

1. The course of study includes the following :—
 - (a) Embryology and Anatomy of the Eye, Orbit and related structures.
 - (b) Physiology of the eye,
 - (c) Optics.
 - (d) Pathology and Bacteriology of the diseases of the eye.
 - (e) Diseases of the eye and its adnexa,
 - (f) Ophthalmoscopy,

- (g) Ophthalmic operations,
- (h) Ophthalmology in relation to general medicine.

2. The examination for the Diploma in Ophthalmology shall consist of two parts. Examination for Part I of the course shall be held at the end of three months after the commencement of the course and that for Part II shall be held on completion of the course. The examination shall consist of written, oral, clinical, and practical tests conducted by a Board of Examiners.

3. (a) D. O. Examination Part I: There shall be two written papers, each of three hours' duration and an oral examination.

Paper I—Anatomy and Embryology of the Eye and its relative structures.

Paper II—Physiology of the Eye and Optics.

(b) D. O. Examination Part II: There shall be two written papers, each of three hours' duration.

Paper I—Diseases of the Eye and Ophthalmic Surgery.

Paper II—Pathology and Bacteriology of the diseases of the eye and diseases of the eye in relation to general medicine.

There shall be a clinical, practical and oral examination.

4. Full marks for the examination shall be:—

Part I—100 for each of the two written papers and

100 for the oral examination. Pass marks shall be 50 per cent in the written and oral together.

Part II—100 for each of the two written papers.

Clinical	.. 100 marks
Practical	.. 100 marks
and Oral	.. 100 marks

Pass marks shall be 50 per cent in written and oral together, 50 per cent in clinical, and 50 per cent in practical.

*Diploma in
Laryngology and
Otology (D.L.O.) :*

1. The course of study includes the following :—

- (a) Embryology and Anatomy of the Ear, Nose, Throat, Head and Neck, Thorax and related structures,
- (b) Physiology of the Ear, Nose and Throat,
- (c) Acoustics,
- (d) Pathology and Bacteriology of the diseases of Ear, Nose and Throat,
- (e) Diseases of the Ear, Nose and Throat,
- (f) Methods of examination of the Ear, Nose and Throat,
- (g) Operations on the Ear, Nose and Throat,
- (h) Otorhinolaryngology in relation to general medicine and surgery,

2. The examination for the Diploma in Laryngology and Otology shall consist of two parts D. L. O. Examination Part I of the course shall be held at the end of three months from the commencement of the course and that for Part II shall be held on completion of the course. The examination shall consist of written, oral, clinical and practical tests and shall be conducted by a Board of Examiners.

3. (a) D.L.O. examination Part I: There shall be two written papers, each of three hours' duration and an oral examination.

Paper I—Anatomy and Embryology of the Ear, Nose and Throat and of its related structures.

Paper II—Physiology of the Ear, Nose and Throat and Acoustics.

(b) D.L.O. Examination Part II: There shall be two written papers each of three hours' duration.

Paper I—Diseases of the Ear, Nose and Throat and operations on the Ear, Nose and Throat.

Paper II—Pathology and Bacteriology of the diseases of the Ear, Nose and Throat and diseases of the Ear, Nose and Throat in relation to general medicine and surgery.

There shall be a clinical, practical and oral examination.

4. Full marks for the examination shall be :—
 Part I—100 for each of the two written papers and
 100 for the oral examination.
 Pass marks shall be 50 per cent in each written and oral together.

Paper II—100 for each of the two written papers :—

Clinical examination	100 marks
Practical examination	100 marks
Oral examination	100 marks

Pass marks shall be 50 per cent in written and oral together and 50 per cent in clinical and 50 per cent in practical.

Diploma in Anaesthesiology (D.A.) :

1. The course of study includes the following :—

(A) Anatomy as applied to Anaesthesia and Analgesia.

(B) Physiology : Circulatory system (origin and conduction of cardiac impulse, control of blood vessels, disturbances in the cardio-vascular system as a result of physiological adaptation or trauma). Composition, formation and function of blood and tissue fluid. Determination of volume of blood. Respiratory system (The Physiology of anoxia and the effect of disturbed acid base equilibrium. Control of respiration. Respiratory functions of blood). Nervous system (Structure and functions of the brain and spinal chord. Physiology of sensation, Neuromuscular conduction, Visceral sensation, Autonomic nervous system).

Synaptic transmission, (Formation and conduction of cerebrospinal fluid). Metabolism and Nutrition (The general principles. Endoc-

rine system. Renal and hepatic function). The water and salt balance of the body and thermoregulation of the body.

(C) Pathology :

Body temperature and fever.

The principles of infection, resistance and immunity. The bacteriology of surgically important infections. Circulatory system (The disturbances resulting from injury, disease or shock). Abnormalities in the blood.

Respiratory system :—Disturbances resulting from injury and disease.

Nervous system :—The cerebrospinal fluid in health and disease.

The autonomic nervous system ; its derangement in disease and the effect of injury.

(D) Pharmacology :

Anaesthetic drugs. Analgesics and hypnotics. Drugs acting upon the autonomic nervous system, Cardiovascular system and Central Nervous system. Diuretic and aperients. The principles of Hormone therapy.

(E) Anaesthesia and analgesia :

The history, theory and practice of anaesthesia. Inhalational anaesthesia : intravenous, rectal and other methods of inducing anaesthesia ; local regional and spinal anaesthesia.

Anaesthesia in relationship to diseases.

Pre-operative investigation, preparation and medication, the recognition of post-operative complications and their treatment.

(F) Practical Anaesthesiology :

2. The examination for the Diploma in Anaesthesiology shall consist of written, oral, practical and clinical tests and shall be conducted by a Board of Examiners.

3. There shall be three written papers each of three hours' duration, namely:—

Paper I—Physiology and Pharmacology with special reference to anaesthesia and analgesia.

Paper II—Anatomy and Clinical Pathology with special reference to anaesthesia and analgesia.

Paper III—Anaesthesia and Analgesia including pre-operative and post-operative treatment, clinical medicine and surgery concerning these treatments, and the application of basic science to anaesthesia.

4. Full marks for the examination shall be:—
100 for each of the written papers, 150 for oral and practical and 50 for clinical

Pass marks shall be 50 per cent in written, 50 per cent in oral and practical and 50 per cent in clinical.

Diploma in Clinical Pathology (D.C.P.):

1. The course of study includes the following:—

I. Hematology and Clinical Pathology.

Routine methods of investigations, cell count (Erythrocytes, Leucocytes, Thrombocytes and limits of accuracy). Estimation of haemoglobin, colour index, Packed cell volume and absolute values for cell size etc., (M.C.V. & M.C.D., M.C.H.C.) The development and identification of the blood cells in health and diseases. Bone marrow biopsy. The patho-genesis of the anaemias. Blood pigment metabolism. Special laboratory tests used in the investigation of haemolytic anaemias and haemorrhagic diseases. Estimation of Erythrocyte sedimentation rate. The leucocytes; variation in diseases. Agranulocytosis, Leukaemia, Infectious mononucleosis; the Paul Bunnell Reaction. Tropical Eosinophilia. Blood groups and blood transfusion, the storage of blood; the Rhesus factor, investigation of transfusion, Haemograms in common tropical and non-tropical diseases incident in India, i.e., Amebiasis, Kala-Zar, Malaria, Ankylostomiasis and other intestinal hel-

minthic infection, filariasis, hydatid diseases, tuberculosis, enteric fevers, etc.

The diagnosis of pregnancy, cytology of body fluids, urinary sediments. Medical parasitology (Proto-zoology, Helminthology and elementary Entomology).

Routine examination of faeces, urine, sputum, smears, blood (total and differential counts, haemoglobin estimation, parasites, formolgel and urea stibamine tests for diagnosis of diseases). Examination of seminal fluid.

II. Chemical Pathology :

Bio-chemical technique ; measurements ; gravimetric and volumetric ; Colorimetry and Photometry, Dubosque and photo-electric colorimeter, photo-meters, Flourimetry, spectroscopy, Indicators, Measurement of pH. Composition of Normal Body fluids.

Urine : Composition, normal and abnormal excretion specific gravity, Reaction and pH. Glucose, Acetone, Albumin, Bence-Jones proteins, Blood and Bile-pigments, Urobilin and Urobilinogen, Indican, Melanin, urea (Hypobromite urea-Nessler) Total Nitrogen, Creatinine and creatine uric Acid. Chlorides, Sodium Potassium, Diastase, Ascorbic Acid, Aneurine.

Blood : Capillary blood, Venous blood, de-proteinisation of blood, urica, non-protein nitrogen, Uricacid, creatinine, Inorganic phosphate, glucose, acetone bodies, galactose, Sulphonamides haemoglobin.

Plasma : Taking of blood for plasma, bilirubin cholesterol, proteinins, albumin, globulin, and fibrinogen-Kjeldahl method, Nessler method, specific gravity, Chlorides, Sodium, CO_2 , Combining power Phosphorus (total and soluble, free and liquid) Phosphatase (alkaline and acid, Amylase, Ascorbic acid).

Serum : Calcium, potassium, colloidal gold reaction. Thymol turbidity test, Eromsulphthalin test, Acetone bodies.

Cerebrospinal fluid : Composition, abnormal constituent tests for globulin, Total protein Chlorides, sugar, Lange's Colloidal gold reaction.

Faeces : Occult blood, Fat (neutral, soap and free) urobilinogen.

Calculi : Renal and biliary.

Gastric analysis : Test meal (systemic, fractional, alcohol, histamine gastric acidity, bile, mucus, blood lactic acid, total chlorides.

Test for functions : Glucose tolerance test. Galactose tolerance test. Hippuric Acid test, Bromsulphthalein test, Urea-clearance test.

Carbohydrate metabolism, in diabetes : Digestion Hepatic function in Jaundice. Kidney function in nephritis. Calcium and phosphorus Metabolism, Chemotherapy Acid base balance water and salt balance.

III. Bacteriology (including Mycology and Virology).

Bacteriological technique ; Microscopy, staining, cultivation, Bacterial counting.

Preparation of vaccine. Testing of antiseptic. Preparation of agglutinating antisera care of animals. Animal autopsy.

Serology, Precipitation reaction, Agglutination reaction including 'H' and 'O' "Type" and Group agglutination of Salmonellae, agglutinin, absorption, Complement-fixation of reactions.

The systematic study of bacteria of medical importance.

Routine investigations ; Bacteriological examination of pus-throat, vaginal, cervical and other swabs, blood culture ; cerebrospinal faeces, urine, sputum ; streptococcal grouping ; pneumococcal typing ; Phage typing, Virulence tests for diphtheria bacilli, cultural and inoculation test for tubercle bacilli, Vidal and other agglutination test, Gono-coccal complement fixation tests, W. R. Reaction kahn and other flocculation tests, Schick, Dick Manteou

and other skin tests based on allergic reaction Bacteriological examination of water and milk Laboratory tests in relation to chemo and antibiotic therapy.

Mycology: Collection and Microscopic examination of Pathological Materials. Culture and animal inoculation, Skin tests, Routine investigations of some common fungal diseases.

Virology: Demonstration of common virological technique, collection of material and inoculation into choricallantois amniotic and yolk sac membranes of chick embryo-Filtration; Stating.

IV. Morbid Anatomy and Histology:

Post-mortem technique and appearances, selection of treatment of tissues, fixation decalcification, methods and preparing sections; freezing, paraffin, Celliodin staining-routine and special methods systematic course in morbid anatomy and histology including surgical biopsy diagnosis, Neutropathology, Gynaecological Pathology, Meseum technique, Reporting.

2. On completion of the course there shall be an examination consisting of written, oral and practical tests conducted by a Board of Examiners.
3. There shall be four written-cum-practical examinations, each of three hours' duration.
Paper I—Morbid Anatomy and Histology.
Paper II—Bacteriology including Serology, Mycology and Verology.
Paper III—Chemical Pathology.
Paper IV—Haematology and Clinical pathology.

There shall also be an oral examination covering the whole course.

4. Full marks shall be—100 for each paper and the corresponding practical and 100 marks for the oral.

Pass marks shall be 50 per cent in written-cum-practical examination and 50 per cent in the oral.

POONA UNIVERSITY

INTRODUCTORY: CHARACTER OF THE UNIVERSITY

The University of Poona is both an affiliating and a Teaching University. Within the Poona area, under Section 40 of the Act, all teaching, training and instruction beyond the stage of intermediate examinations is imparted by the University. The agency used however, is not confined to the teachers appointed directly by the University. Teachers belonging to the Staff of the Constituent Degree Colleges and Recognised Institutions, recognised by the University as having the necessary qualifications for University teaching, and contributed by the Constituent Degree Colleges are also utilised for the University's work of Post-Intermediate and Post-Graduate teaching and research guidance. At present the teaching work of the University is being carried on by these teachers contributed by the Constituent Degree Colleges and Recognised Institutions, and the University Professors, Readers and Lecturers.

CONSTITUTION OF THE UNIVERSITY

The Poona University Act, 1948, was enacted by an Act No. XX of 1948 of the Bombay Provincial Government as it was thought expedient to establish and incorporate a teaching and affiliating University at Poona as a measure in the decentralisation and reorganisation of University education in the Province of Bombay.

The Principal authorities of the University are the Court, the Executive Council, Academic Council, Faculties, Boards of Studies, the Board of University Teaching in Poona and such other bodies of the University as may be declared by the statutes to be the authorities of the University.

OFFICERS AND STAFF OF THE UNIVERSITY

Chancellor

— His Excellency Shri. Shri Prakasa,
Governor of Bombay.

Vice-Chancellor

— Dr. R. P. Paranjpye, M.A. (Cantab),
D.Sc., D.Litt.

Deans of Faculties

<i>in Arts</i>	— Principal N. G. Suru, M.A.
<i>in Science</i>	— Professor V. V. Apte, M.Sc.
<i>in Mental, Moral and Social Science</i>	— Professor D. D. Vadekar, M.A.
<i>in Law</i>	— Principal S. G. Dabholkar, M.A., LL.B.
<i>in Medicine</i>	— Principal B. M. Desai, M.S., F.C.P.S.
<i>in Engineering</i>	— Principal V. K. Kelkar, B.E., A.M.I.E.
<i>in Agriculture</i>	— Principal L. S. S. Kumar, M.Sc. (Lond.), A.R.C.S., D.I.C.
<i>Registrar</i>	— Shri Y. D. Khan.
<i>Deputy Registrar</i>	— Shri R. S. Sardeshpande, B.A.
<i>Assistant Registrar</i>	— Shri R. B. Manerikar, M.A., LL.B.

NAMES OF THE AFFILIATED COLLEGES AND RECOGNISED
RESEARCH INSTITUTIONS AND THEIR PRINCIPALS AND HEADS

*College or Institution.**Principal or Head.*

College of Engineering, Poona-5.	Principal G. V. Vartak, B.E.
Rajaram College, Kolhapur.	Principal A. N. Upadhye.
Fergusson College, Poona-4.	Principal S. V. Kogekar.
College of Agriculture, Poona-5.	Principal L. S. S. Kumar, M.Sc., (Lond.), A.R.C.S., D.I.C.
Sir Parashurambhau College, Poona-2.	Principal B. V. Bhide, M.Sc., A.I.I.Sc.
Willingdon College, Sangli (S.M.C.).	Principal G. L. Chandratreya, M.A. (Cantab), B.Sc.
H. P. T. College, Nasik.	Principal S. G. Puranik.
Law College, Poona-4.	Principal G. V. Pandit, M.A., LL.M.
N. Wadia College, Poona-1.	Principal N. G. Suru, M.A.
Shahaji Law College, Kolhapur (S.M.C.).	Principal S. G. Dabholkar, M.A., LL.B.
S. M. T. T. College, Kolhapur (S.M.C.).	Principal S. V. Kelkar.
D. A. V. College, Sholapur.	Principal Sri Ram Sharma, M.A., F.R. (Hist.) Soc., F.R.A.S.
Tilak College of Education, Poona-2.	Principal B. V. Bapat.
B. M. College of Commerce, Poona-4.	Principal T. M. Joshi, M.A.
R. P. Gogate College, Ratnagiri.	Principal B. G. Surve.
Mooljee Jaitha College of Arts & Science, Jalgaon (E.K.).	Principal Y. S. Mahajan, B.Sc. (Econ.) (London), Bart-at-Law.

*College or Institution.**Principal.*

Pratap College, Amalner (E.K.).	Dr. V. P. Damle, M.Sc., Ph.D. (Lond.), D.I.C. (London).
B. J. Medical College, Poona-1.	Dr. B. M. Desai, M.S., F.C.P.S.
M. E. Society's College of Arts and Science, Poona-4.	Principal M. N. Bhat, M.A., L.T.
Ahmednagar College, Ahmed- nagar.	Principal T. Barnabas, M.Sc.
Chhatrapati Shivaji College, Satara (Camp.).	Principal P. C. Patil.
Walchand College of Engineer- ing, Sangli (S.M.C.).	Principal V. K. Kelkar, B.E.
G. K. Gokhale College, Kolha- pur.	Principal B. H. Khardekar, M.A., Bar-at-Law.
D. A. V. College of Commerce, Sholapur.	Principal T. B. Narsimhachari, M.A.
Sangameshwar College, Shola- pur.	Principal M. S. Hallur, M.A.
Sadguru Gadge Maharaj College, Karad.	Principal B. A. Chaugule.
Dayanand College of Education, Sholapur.	Principal K. S. Mardikar, M.A., Ph.D., M.Ed.
College of Education, Satara.	Principal R. A. Kulkarni, M.A., M.Ed. (Leeds).
Ayurveda Mahavidyalaya, Poona-2.	Principal K. V. Kulkarni.
S. S. V. P. Sanstha's Arts Col- lege, Dhulia.	Principal M. Y. Vaidya.
Mudhoji College, Phaltan.	Principal D. H. Oke.
College of Commerce, Nasik.	Principal V. S. Vartikar.
College of Commerce, Kolhapur.	Principal B. S. Bhanage.

*Recognised Institutions.**Directors.*

Bhandarkar Oriental Research Institute, Poona-4.	Lt. Col. R. D. Karmarkar, M.A.
Gokhale Institute of Politics and Economics, Poona-4.	Prof. D. R. Gadgil, M.A., M.Litt. (Cantab).
Deccan College Post-Graduate and Research Institute, Poona-6.	Dr. H. D. Sankalia, M.A., Ph.D.

NUMBER OF STUDENTS IN THE UNIVERSITY

The total number of students in all the affiliated Colleges was about 18,950 in 1956-57.

In the Poona area, the number of Post-Intermediate and Post-Graduate students receiving instruction directly under the University in the year 1957-58 is as follows:—

B.A.	..	900
B.Sc.	..	856
M.A.	..	250
M.Sc.	..	200
Ph.D.	..	22
B.Sc. (Hons.)	..	125
M.Sc. (by Research)	..	9

FREE STUDENTSHIPS, SCHOLARSHIPS AND MEDALS

Each affiliated Institution has a certain number of Scholarships, Prizes and Medals and also provision for Free Studentships, the maximum being 10 per cent of the fees received. In the Poona area where Post-Intermediate and Post-Graduate Teaching is under the auspices of the University Free Studentships and Scholarships are awarded to the students of the B.A. and B.Sc. Classes up to 10 per cent of the fee income and to the Post-Graduate students up to 15 per cent of the fee income. Free studentships are awarded on the basis of merit as well as need.

In addition, there are a few endowed Scholarships.

The University also awards Junior Research Stipends of Rs. 100 and Senior Research Stipend of Rs. 200-10-250 per month to students engaged whole time in Research for Ph.D. and Post-Ph.D. work respectively, if such students have high Second Class career.

LIBRARY, LABORATORIES, GARDENS AND FARMS

Each affiliated College has, of course, its own Library and Laboratory. The College of Agriculture in Poona has its own farms and the Botanical Garden in Kirkee is utilised by the College of Agriculture. The University has its own Library which has so far built up a stock of about 51,003 books.

The University has instituted its own Departments mainly for Post-Graduate research in the following subjects:— 1. Marathi; 2. Sanskrit; 3. Politics and Public Administration; 4. Experimental Psychology; 5. Chemistry; 6. Physics; 7. Mathematics and Statistics; 8. Botany; 9. Zoology; 10. Geography; and 11. Geology.

The University has its own Laboratories in subjects 4 to 11 above, where research can be carried on under the guidance of the Head of the University Department.

Post-Graduate Scientific work is being done also in the Laboratories of the Constituent Degree Colleges and Recognised Institutions.

PROVISION FOR RESEARCH

A sum of Rs. 42,000 has been set apart in the budget for Post-Graduate research in the Faculties of Medicine, Engineering, Agriculture and for Schemes of research in Ancient Indian Culture and Maratha History. The grants to the Faculties may be utilised by them either for schemes of advanced lectures or for Post-Graduate research.

MILITARY TRAINING

The University has a National Cadet Corps.

RESIDENCE AND COST OF LIVING

There is hostel accommodation in each of the Constituent Colleges in Poona as well as in the Affiliated Colleges outside. A Post-Graduate Hostel for about 58 students is maintained by the University. It is located in the University Campus. The average monthly expenses per head on the meals were about Rs. 37 only.

BUDGET

Abstract of Budget for 1957-58.

<i>Income.</i>		<i>Expenditure.</i>	
	Rs.		Rs.
Govt. and Municipal Grant	21,18,838	Establishment charges	2,59,939
Examination Fees	7,05,640	Examination charges	5,12,090
Tuition Fees	10,80,741	Teaching and Research	31,78,529
Other Fees	2,24,635	University Library	61,000
Extra-Mural Activities	6,000	University Estate	1,32,086
Income from Publication	9,500	Printing, Stationery	
University Press	85,000	& Postage	69,100
Employees subscription		University Provident Fund	44,904
to Provident Fund	22,452	Travelling Allee., Election	
Misc. Receipts	14,950	& Convocation Expenses	69,200
University Canteen	420	University Press	1,42,065
		Other items	81,965
Total Income	42,68,176	University Canteen	2,400
Excess of Expenditure	2,82,702		
	<hr/>		<hr/>
	45,50,878		45,50,878
	<hr/>		<hr/>

WOMEN'S EDUCATION

No special provision has been made for Women's Education. Admission to the Affiliated Colleges and to the University is open to men and women students on the same footing. Roughly 25 per cent of the students of the University are women students.

STUDENTS' INFORMATION BUREAU AND ITS ACTIVITIES

The University has an Information Bureau for the purpose of supplying information regarding Indian and Foreign Universities and specialised Institutes. It is combined with an Employment Bureau.

PROVISION FOR SAFEGUARDING HEALTH, MEDICAL INSPECTION, DISCIPLINE, ETC.

The Board of Students' Welfare looks after the health of the students.

Ordinarily, the Principal of the College maintains discipline in his Institution. This is also the case in the Poona area as far as the Post-Intermediate University students are concerned.

COURSES OF STUDIES

The University provides instruction either directly or through its Affiliated Colleges for the following degrees. The qualifications for entrance to the course and the duration of the course for each Degree are specified against it. The entrance examinations mentioned are those of this University unless otherwise indicated and also include similar examinations of other Universities and bodies recognised as equivalent thereto by this University :—

<i>Degree.</i>	<i>Entrance Qualification.</i>	<i>Duration.</i>	<i>Remarks.</i>
B.A.	Secondary School Certificate (Matriculation) Examination with English as one of the subjects.	4 Academic years with Intermediate Examination after 2 years.	
B.Sc. (Gen.)	Do.	Do.	
B.Com.	Do.	Do.	
B.Sc.	Do.	Do.	

<i>Degree.</i>	<i>Entrance Qualification.</i>	<i>Duration.</i>	<i>Remarks.</i>
B.Sc. (Hons.)	B.Sc. (Gen.)	1 Academic year.	
B.T.	Any Bachelor's Degree.	Do.	
M.A.	B.A.	2 Academic years (4 Terms).	
M.Com.	B.Com.	Do.	
M.Ed.	B.T.	1 Academic year.	
M.Sc.	B.Sc. (Gen.) old. B.Sc. (Hons.).	2 Academic years after B.Sc. 1 Academic year after B.Sc. (Hons.).	Degrees taken by Papers or Research.
M.Sc. (Agri.)	B.Sc. (Agri.).	2 Academic years.	Degrees taken by Papers & Research or by Research alone.
LL.B.	Intermediate Arts, Science or Com- merce and then Law Preliminary Examination.	4 Terms.	
LL.M.	LL.B.	6 Terms.	Degrees taken by Papers or Research.
M.B.B.S.	Intermediate Science with Biology.	10 Terms.	
M.D.	M.B.,B.S. & employed on Hospital Staff.	3 Years.	
M.S.	Do.	3 Years.	

<i>Degree.</i>	<i>Entrance Qualification.</i>	<i>Duration.</i>	<i>Remarks</i>
B.E.	Intermediate Science with Mathematics.	6 Terms.	
M.E.	B.E.	4 Terms.	
Ph.D.	Master's Degree.	4 Terms.	
D.Litt.	Bachelor's or Master's Degree or Ph.D.	Awarded on independent published work in Arts.	
D.Sc.	Do.	Awarded on independent published work in Science.	
Diploma in Oriental Learning.	S.S.C.	2 Years.	
Diploma in Music.	S.S.C.	2 Years.	
Certificate Course in Modern Foreign Languages (French & German).	S.S.C.	1 Year.	
Lower Diploma in Modern Foreign Languages (French & German).	Passing of the Certificate Course.	1 Year.	
Higher Diploma in Modern Foreign Languages (French & German).	Passing of the Lower Diploma Course.	1 Year.	

For rules and regulations, courses of study and detailed syllabus in respect of each of the above degree courses, a reference is requested to the University Hand-Book.

AVERAGE TUITION FEES

	Rs.
B.A.	.. 220 per year.
B.Sc.	.. 270 per year.
M.A.	.. 200 per year.
M.Sc.	.. 300 per year.
B.Sc. (Hons.)	.. 300 per year.
B.Sc. (Hons.) and M.Sc. with Statistics and Geography.	.. 250 per year.
B.Sc. (Hons.) and M.Sc. with Mathematics.	.. 200 per year.
Ph.D.	.. 125 per term.
M.Sc. (by Research)	.. 150 per term.

RAJASTHAN UNIVERSITY

INTRODUCTORY : CHARACTER OF THE UNIVERSITY :

The idea of a new University at Jaipur—whether only for the Jaipur State, or for the whole of Rajputana or for Rajputana and Central India—can be traced to the twenties of this century. Several names—notably that of Sir Mirza Ismail among them—may since then be recalled as associated with the schemes for a University in one form or another. It was, however, the privilege of Sir V. T. Krishnamachari, the Prime Minister of Jaipur, to chiefly assist at its birth : and on the 8th of January, 1947, the year of India's Independence, the Act for a federal University for Rajputana was promulgated by the States that had decided upon this joint action. In July following, the University started functioning.

The jurisdiction of the University extends over the ring-shaped region which includes the whole of Rajasthan including of Ajmer-Merwara. The area comprises the following eight political units:—

(1) Bikaner, (2) Jaipur, (3) Jaisalmer, (4) Jodhpur, (5) Matsya-Union (consisting of the former four States of Alwar, Bharatpur, Dholpur and Karauli), (6) Rajasthan-Union (consisting of the former ten States of Banswara, Bundi, Dungarpur, Jhalawar, Kishangarh, Kotah, Pratapgarh, Shahpura, Tonk and Udaipur), (7) Sirohi and (8) Ajmer-Merwara.

The seven units were integrated into a single political unit of Rajasthan (March 30, 1949) and the Ajmer-Merwara was merged in Rajasthan with effect from Nov. 1, 1956 and the University Act has been, in consequence, amended.

Upto the year 1956 the University controlled the High School as well as the University education in this region.

By an Ordinance passed on July 12, 1957, the Government of Rajasthan created the Board of Secondary Education and from that date all the Intermediate Colleges and High Schools within its territorial jurisdiction stood disaffiliated from the University and were automatically affiliated to the Board.

OFFICERS OF THE UNIVERSITY

Visitor :

Dr. Rajendra Prasad, The President of India.

Chancellor :

Sardar Gurmukh Nihal Singh, Governor of Rajasthan.

Vice-Chancellor :

Lt. Col. G. C. Chatterji, M.A. (Panj.), B.A. (Camb.).

Registrar :

Shri K. L. Varma, M.A.

DEANS OF FACULTIES

<i>Faculty of Arts</i>	—	Dr. M. L. Sharma, M.A., D.Litt., Head of the University Department of History, Jaipur.
<i>Faculty of Science</i>	—	Dr. S. M. Mitra, B.Sc. (Hons.), M.Sc. (Phy.), D.Sc. (Dacca), Principal, Birla Science College, Pilani.
<i>Faculty of Commerce</i>	—	Shri C. B. Gupta, M.A., M.Com., Principal, Seth G. B. Podar College, Nawalgarh.
<i>Faculty of Law</i>	—	Vacant.
<i>Faculty of Engineering and Technology</i>	—	Vacant.
<i>Faculty of Medicine, Pharmaceutics and Veterinary Science</i>	—	Lt. Col. A. C. Aggarwala, B.Sc. (Hons.), M.R.C.V.S., A.I.R.O., P.V.S. Class I (Retd.), Principal, Rajasthan College of Veterinary Science and Animal Husbandry, Bikaner.
<i>Faculty of Education</i>	—	Shri K. K. Chaturvedi, M.A., LL.B., T.Dip. (London), B.Ed. (Edinburg), Principal, Govt. Teachers' Training College, Bikaner.

CONSTITUTION OF THE UNIVERSITY

The authorities of the University are :—

Senate.

Academic Council.

Syndicate.

At present the following Faculties are provided :—

Arts,

Science,

Commerce,

Law,

Medicine, Pharmaceutics and Veterinary Science,

Engineering and Technology and

Education.

Each Faculty constitutes its Boards of Studies whose reports regarding the courses of studies are considered by the Faculty and forwarded to the Academic Council with its own recommendations.

UNIVERSITY TEACHING DEPARTMENTS

There are five teaching Departments in the University—Economics and Public Administration, Philosophy, Geology, History and Law. The Department of Economics and Public Administration and History located at Jaipur, of Geology located at Udaipur and that of Philosophy located at Jodhpur carry on both research work for the Ph.D. degree of the University and Post-graduate teaching (M.A., M.Sc.). The University Law College is also located at Jaipur and prepares for LL.B. and LL.M. There are one whole-time Professor, a whole-time Reader and 4 lecturers in the Department of Economics and Public Administration. The total number of students in the Department is—Ph.D.—6, M.A. (Final)—17, M.A. (Econ.) (Previous)—30 and M.A. (Pub. Admn.) (Prev.)—17. The Department of Philosophy, which commenced functioning from July 1950, besides having a full-time Professor has also 2 whole-time lecturers. In addition to the research work the Department also carries on Post-graduate teaching. The total number of students in the Department is —Ph.D.—6, M.A. (Final)—13 and M.A. (Previous)—7. The Geology Department located at Udaipur, which started its work from July 1950, has now 5 research scholars working for the Ph.D. degree of the University. The Post-graduate teaching (M.Sc.—Previous and Final) in Geology formerly carried on at the M. B. College, Udaipur has now been taken over by the University with effect from the session 1957-58. The number of students at present is—M.Sc. (Final)—8 and M.Sc. (Prev.)—4.

As a result of a munificent donation of Rs. 20,000/- p.a., by His Highness the Maharao Sahib of Kota, the University Department of History located at Jaipur commenced functioning with effect from the 1st Nov., 1953, with Dr. M. L. Sharma, M.A., D.Litt., as Professor and the Head of the Department. Besides the Professor there is one Reader and one Lecturer in the Department. Only research work for the Ph.D. degree was being carried on in the Department upto the Session 1956-57. M.A. classes in History have been started with effect from the Session July, 1957. The total number of students in the Department is—Ph.D.—10; M.A. (Prev.)—15; M.A. (Final)—12. The Law College at Jaipur, which had formerly been run by the Government of Rajasthan, was taken over by the University with effect from July 1953 to function as a Department of the University. Besides the Principal, there are 8 lecturers (4 permanent, 1 temporary and 3 part-time) on the staff of the college. The total number of students in the college is—LL.M. (Part II)—5; LL.M. (Part I)—6; LL.B. (Final)—146; LL.B. (Prev.)—240.

AFFILIATED INSTITUTIONS

(A) The number of collegiate institutions affiliated to the University is 41 as listed below :—

- 1 Medical College at Jaipur. (The first batch of students appeared for the Final M.B., B.S. Examination in April 1952.)
- 1 Veterinary College at Bikaner. (The first batch of students appeared for the First B.V.Sc. & A.H. Examination in May 1955).
- 2 Engineering Colleges—one at Pilani for M.E./M.Sc. (Tech. Elec.) and B.E. (Electrical, Mechanical and Tele-Communications) and the other at Jodhpur for B.E. (Civil and Mining).
- 4 Teachers' Training Colleges—one at Udaipur teaching upto M.Ed. standard and one each at Bikaner, Ajmer and Sardarshahr teaching upto the B.Ed. standard.
- 2 Agricultural Colleges—one at Jobner. (The first batch of students appeared for the B.Sc. (Ag.) Examination in March/April, 1951) and the other at Udaipur, which has commenced functioning from July 1955.
- 5 Colleges of Commerce, (one each at Jaipur and Nawalgarh affiliated upto M.Com. standard and 2 at Bikaner and 1 at Jaipur affiliated upto B.Com. standard.)
 Besides 11, 23 of the Arts and Science Colleges have Commerce sections which prepare students for the B.Com., and the M.Com. examinations (5 for M.Com. and 6 for B.Com.).
- 11 Colleges with courses in Arts and Science up to and including Post-graduate classes in M.A. and/or M.Sc. Of these, one specially for women is at Jaipur. One of these colleges (Birla College of Science and Commerce, Pilani) has also Pharmaceutical courses up to the degree standard. I.Pharm. and B.Pharm. classes started with effect from July, 1950.
- 15 Colleges with courses in Arts and/or Science up to and including Degree classes in B.A. and/or B.Sc. Four of these, specially for Women, are at Ajmer, Bikaner, Udaipur and Jodhpur.

Besides the University Law College at Jaipur, 4 of the affiliated colleges have Law Faculties attached to them.

DEGREES, ADMISSION TO EXAMINATIONS AND COURSES OF STUDY

Degrees.

The University has instituted the following degrees :—

B.A., Pass and Honours.	B.Com.
B.Sc., Pass and Honours.	B.E.

B.Sc. (Ag.).	M.Sc. (Med.).
B.Ed.	M.Pharm.
M.B.,B.S.	M.E./M.Sc. (Tech. Elec.).
B.V.Sc. & A.H.	M.O.L.
B.Pharm.	LL.M.
B.O.L.	Ph.D.
LL.B.	..D.Litt.
M.A.	D.Sc.
M.Sc.	LL.D.
M.Com.	Honoris Causa.
M.Ed.	D.Litt.
M.D.	D.Sc.
M.S.	LL.D.

The University also holds the Intermediate Science (in Agriculture), Intermediate in Pharmacy and Sahitya Vinod, Sahitya Visharad and Sahitya Ratnakar (in Hindi) examinations.

ADMISSION TO EXAMINATIONS AND PERIOD OF STUDY ARTS AND SCIENCE

B.A. and B.Sc.—Courses of study for the Bachelor's degree in Arts and Science extend over a period of two academic years and only those candidates are admitted to the second academic year, who after passing the Intermediate Examination of the University or of some other Indian University or Board recognised as equivalent thereto, have attended regular courses of study in an affiliated college.

M.A. and M.Sc.—Courses of study for the Master's degree in Arts as well as in Science extend over a period of two years and there are two examinations *viz.*, the Previous and the Final. The Previous examination is held at the end of the first year and only those candidates are allowed to appear at the examination who after taking the Bachelor's degree examination of the University or a corresponding Bachelor's degree of some other Indian University recognised as equivalent thereto have completed a regular course of study for one academic year in an affiliated college. A candidate is not admitted to the Final examination for the degree of M.A. or M.Sc. unless he has passed the Previous M.A. or M.Sc. examination of the University as the case may be and has completed a regular course of study for one academic year in an affiliated college.

Ph.D.—The degree of Doctor of Philosophy is awarded on the basis of research work extending over a period of at least two years, and carried on at the Headquarters, and under the supervision of a Supervisor approved by the Syndicate for the purpose. Only an M.A., M.Sc., M.Com., M.Ed. or M.Pharm. of this University or of some other Indian University, residing within the territorial jurisdiction of the University,

is qualified to carry on research work for the Ph.D. Degree provided that at the time of the conferment of the degree on him, he must be of at least two years' standing counted from the date of conferment of the Master's degree on him.

EDUCATION

B.Ed.—Courses of study for the degree of Bachelor of Education extend over a period of one academic year. Only those candidates are admitted to the examination who after taking the Bachelor's or Master's degree of this University or of some other recognised Indian University have completed a regular course of study in a college affiliated for the purpose.

M.Ed.—Courses of study for the degree of Master of Education extend over a period of one academic year. Candidates who have after graduation passed the B.Ed., B.T. or L.T. examination or any other examination accepted as equivalent thereto, are admitted to the course.

LAW

LL.B.—The examination for the degree of Bachelor of Laws extend over a period of 2 academic years and there are two examinations *viz.*, the Previous and the Final. The Previous examination is held at the end of the first year and only those candidates who after taking the Bachelor's degree of this University or a corresponding Bachelor's degree of some other Indian University recognised as equivalent thereto, have completed a regular course of study for one academic year in an affiliated college. A candidate is not admitted to the Final examination unless he has passed the Previous examination and has completed a regular course of study for one academic year in an affiliated college.

LL.M.—The examination for the degree of Master of Laws consists of 2 parts: Part I and Part II. A candidate who has passed the LL.B. examination of this University or an examination of some other University recognised by the Syndicate as equivalent thereto is admitted to the Part I examination after having undergone a course of study in the prescribed subjects for one academic year in an affiliated college. Candidates who having passed the Part I examination and have undergone a course of study in the prescribed subjects are admitted to Part II examination after one year's course of study in an affiliated college. Whole-time teachers of law after more than 3 years' service in an affiliated college of the University are eligible to appear at the examination without having undergone the prescribed course of study in an affiliated college.

AGRICULTURE

B.Sc. (Ag.).—Admission to the B.Sc. (Ag.) examination is granted to those who, after passing the Intermediate Science (in Agriculture)

Part II examination of this University or an examination declared as equivalent thereto and to have, since the passing of this examination, prosecuted a regular course of study for not less than two academic years at an institution recognised by the University for the B.Sc. (in Agriculture) examination.

COMMERCE

B.Com.—Admission to B.Com. examination is granted to those who after passing any of the following examinations have prosecuted a regular course of study at a college affiliated to the University for the B.Com. degree :—

- (i) The Intermediate examination of the Board of High School and Intermediate Education, United Provinces, the Intermediate Examination of the Central Board of Secondary Education, Ajmer, or of an Indian University incorporated by any Law for the time being in force.
- (ii) The Commercial Diploma Examination of the Allahabad University or of the Board of High School and Intermediate Education, United Provinces.
- (iii) The Intermediate examination in Commerce of the University or the Intermediate examination in Commerce of the Board of High School and Intermediate Education, United Provinces or of the Central Board of Secondary Education, Ajmer.
- (iv) The Intermediate (Group B)—Special examination of the Delhi University with Regional and Commercial Geography as an optional subject.
- (v) The Intermediate examination of Andhra University with Economics, Commercial Geography and Accountancy as optional subjects.
- (vi) The Intermediate examination in Commerce of the Nagpur University.
- (vii) The Intermediate examination in Commerce of the Banaras Hindu University, Banaras.
- (viii) The Intermediate examination in Commerce of the Bombay University.

Courses of study for the B.Com. examination extend over a period of three academic years and the examination is held in two parts *viz.*, E.Com. (Prev.) and B.Com. (Final). The Previous examination shall be held at the end of the second year's regular course of study in an

affiliated college and the Final examination at the end of the third year's regular course of study in an affiliated college. No candidate shall be allowed to appear at the Final examination unless he has passed the Previous examination of the University. Provided that candidates who have passed the examinations mentioned in clauses (ii) to (viii) above, are exempted from taking the first year of B.Com. for admission to the B.Com. (Prev.) examination.

M.Com..—The courses of study for the Master's degree in Commerce extend over a period of two years and there are two examinations *viz.*, the Previous examination and the Final examination and only those candidates who, after taking their B.Com. degree of the University or of an Indian University recognised for the purpose by the Syndicate, have completed a regular course of study in an affiliated college for one academic year, are admitted to the Previous examination for the degree of Master of Commerce. The candidates who, after passing the Previous M.Com. examination of the University, have completed a regular course of study for one academic year in an affiliated college, are admitted to the Final examination for the degree of Master of Commerce.

MEDICINE

M.B.,B.S..—The courses for the M.B.,B.S. examinations extend over a period of 5½ years and the following three examinations are held :

- (1) The First M.B.,B.S. Examination,
- (2) The Second M.B.,B.S. Examination, and
- (3) The Final M.B.,B.S. Examination,

which are held twice a year ordinarily in March-April and October on such dates as the Syndicate from time to time determines. (The first batch of students took their first M.B., B.S. Examination in April, 1949).

A candidate who after passing the Intermediate examination of the University, with Physics, Chemistry (including Organic Chemistry) and Biology, or the Intermediate examination of some other Indian University incorporated by any law for the time being in force, with the same group of subjects as mentioned above, or any other examination recognised by the University as equivalent thereto, has attended a regular course of study in an affiliated college for two academic years and has attained the age of 17 years at the time of admission, is eligible for appearing at the First M.B.,B.S. examination.

A candidate who, after passing the First M.B.,B.S. examination of the University has attended a regular course of study in an affiliated college for at least 2 academic years is eligible for appearing at the Second M.B.,B.S. examination.

A candidate who, after passing the First M.B.,B.S. examination, has for three years and for not less than one academic year after Second

M.B.,B.S., attended a regular course of study prescribed for the Final M.B.,B.S. examination and has passed the Second M.B.,B.S. examination, is eligible for appearing at the Final M.B.,B.S. examination.

A candidate after passing the Final M.B.,B.S. examination is required to undergo a course of Post-examination Training in an institution or under a Medical Officer recognised by the University for a period of six months, before he is awarded the degree.

M.D., M.S. and M.Sc. (Med.).—Courses for the M.D. and M.S. examinations extend over a period of 3 academic years and those for the M.Sc. (Med.) for 2 years. Candidates who have passed the M.B.,B.S. examination of the University or an examination recognised as equivalent thereto, and have registered themselves for the Post-graduate study in the University are eligible for admission to the examination after they have completed the Post-graduate study in the subject under an approved teacher in an Institution approved by the University for three or two years as the case may be.

B.V.Sc. & A.H.—Courses for the degree of Bachelor of Veterinary Science and Animal Husbandry examination extend over a period of 4 years and the following examinations are held twice a year ordinarily in April and October.

- (1) The First B.V.Sc. & A.H. Examination.
- (2) The Second B.V.Sc. & A.H. Examination.
- (3) The Third B.V.Sc. & A.H. Examination.
- (4) Final B.V.Sc. & A.H. Examination.

Candidates who, after passing the Intermediate examination in Science (with Physics, Chemistry and Biology) of the University or an examination recognised as equivalent thereto with the same group of subjects as mentioned above, have attended a regular course of study in an affiliated college for one academic year, are eligible for the First B.V.Sc. & A.H. examination.

Pharmaceutical Courses (I.Pharm. and B.Pharm.).

I.Pharm.—The I.Pharm. examination consists of two examinations:

- (i) Intermediate examination in Pharmacy Part I, and
- (ii) Intermediate examination in Pharmacy Part II.

A candidate who after passing the High School Examination of the University with Science or General Science or an examination recognised by the University as equivalent thereto, has attended a regular course of study in an affiliated college for one academical year, is eligible for appearing at the I.Pharm. Part I examination. Only such candidates as have passed the Part I examination are eligible for appearing at the I.Pharm. Part II examination. Provided that a candidate who has passed the Intermediate examination of the University, or an exa-

mination equivalent thereto with Chemistry, Physics and Biology or Mathematics as optional subjects may be admitted to the I.Pharm. Part II examination after prosecuting a regular course of study for not less than one year, since the date of his passing the aforesaid examination, at an institution recognised by the University for the I.Pharm. examination. Such candidates shall also be required to appear in the paper or papers prescribed for Biology for the Intermediate examination in Pharmacy Part I if they had not taken Biology for the Intermediate examination in Science.

After the completion of the regular academic course and passing at the Intermediate examination in Pharmacy a candidate shall be granted a Pharmacist's diploma on production of a satisfactory evidence of having undergone practical training in a recognised institution—Hospital, Pharmacy or Dispensary, for not less than 750 hours covered in not less than 3 months, on certification by the Principal of the college concerned.

B.Pharm..—The examination for the degree of B.Pharm. consists of three examinations :

1. Bachelor of Pharmacy Examination Part I.
2. Bachelor of Pharmacy Examination Part II.
3. Bachelor of Pharmacy Examination Part III.

A candidate who after passing the Intermediate examination in (i) Science (with Physics, Chemistry, Mathematics or Biology) or (ii) Pharmacy of the University or an equivalent examination thereto, has attended a regular course of study in an affiliated college for one academic year, is eligible for appearing at the B.Pharm. examination Part I.

Provided that a candidate who, after passing the I.Pharm. examination of the State Medical Faculty of West Bengal has attended a regular course of study in an affiliated college for one academic year, shall be eligible for appearing at the B.Pharm. Part I examination together with the (1) Forensic Pharmacy, and (2) Pharmaceutical Chemistry, subjects of the I.Pharm. Part II examination.

A candidate who, after passing the B.Pharm. examination Part I, of the University or failing to pass or appear in not more than two subjects of the examination, has attended a regular course of study in an affiliated college for one academic year, is eligible for appearing at the B.Pharm. Part II examination.

A candidate who, after passing the B.Pharm. examination Part II of the University, or failing to pass or appear in not more than two subjects, has attended a regular course of study in an affiliated college for one academic year, is eligible for appearing at the B.Pharm. Part III examination.

Provided that a candidate who has passed the M.Sc. examination in Chemistry of the University or an examination equivalent thereto may be admitted to B.Pharm. Part II examination after prosecuting a regular course of study for not less than one academic year since the date of passing the aforesaid examination at an institution recognised for the B.Pharm. Part II examination. Such candidates shall be exempted from appearing in Physical Chemistry and Advanced Organic Chemistry required for B.Pharm. Part II examination, but shall be required to appear in a paper or papers on Human Anatomy, Physiology, Hygiene and First Aid and Biology prescribed for B.Pharm. Part I examination if he has not already been exempted from the same by virtue of his having already passed in these subjects previously.

After the completion of a regular academic course and passing the B.Pharm. Part III examination, a candidate shall be granted a Pharmacist's diploma on production of a satisfactory evidence of having undergone a practical training in a recognised institution, Hospital, Pharmacy, Dispensary or a manufacturing establishment for not less than 3 months on certification by the Principal of the college concerned.

ENGINEERING

B.E.—The courses of study for the degree of Bachelor of Engineering extend over a period of four years, as an integrated course of which at least 6 months (140 working days) are devoted to practical training in a workshop, factory, mine or Engg. works approved by the Principal of an Engineering College.

There is an examination at the end of each year, viz. :—

At the end of first year,

First examination for the B.E. Degree.

At the end of second year,

Second examination for the B.E. Degree.

At the end of third year,

Third examination for the B.E. Degree.

At the end of fourth year,

Final examination for the B.E. Degree.

A candidate who, after passing the Intermediate examination with Mathematics, Physics and Chemistry of the University, or any other examination recognised by the University as equivalent thereto, has attended a regular course of study in an affiliated college for one academical year, is eligible for appearing at the First examination, for the B. E. Degree, which is common for Mechanical, Electrical, Tele-communication and Civil Engg. Branches.

M.E.—The courses of study for the M.E. (Electronics) and M.Sc. (Technology) in Electronics degrees are one and the same and extend to two academical years.

Candidates who have obtained the B.E. degree in Tele-communication or Electrical Engineering in first class from this University or has obtained the M.Sc. degree in Physics with wireless as one of the special subjects in first division from this University or has secured any degree or diploma from any other University or Institute recognised by the University as equivalent to any of the above are eligible for admission. Provided that if candidates having passed in first division are not available, second class candidates may be admitted as a special case.

SUBJECT AND PAPERS FOR THE EXAMINATIONS AND SCALE OF MARKS

Bachelor of Arts.—Candidates are examined in General English and any three of the following branches: (a) English Literature, (b) Latin, Greek, Hebrew, Arabic, Persian or Sanskrit, (c) Hindi, Urdu, French, German or Italian, (d) Mathematics, (e) Philosophy, (f) Economics, (g) History, (h) Political Science, (i) Geography, (j) Indian Music, (k) Drawing and Painting, (l) Home Science, (m) Sociology, (n) Geography, (o) Archaeology and (p) Social Sciences. The examination in General English consist of 2 papers.

The minimum pass marks in all subjects are 33 per cent. There are three divisions: Candidates are declared to have passed in the First Division, if they obtain 60 per cent or more marks of the aggregate; in the Second Division if they obtain 45 per cent or more and in the Third Division if they obtain the minimum pass marks in each subject of the aggregate.

Master of Arts.—A candidate may select one of the following subjects:

(1) Languages: English, Sanskrit, Arabic, Persian, Latin, Urdu and Hindi, (2) Philosophy, (3) History, (4) Mathematics, (5) Economics, (6) Political Science, (7) Geography, (8) Sociology and (9) Public Administration.

At the previous examination, there are four papers in English Literature, Sanskrit, Arabic, Persian, Hindi, Urdu, Mathematics, Philosophy, Economics, Sociology, Political Science and Public Administration, and three papers in Latin and History. For the Final examination four papers are in English Literature, Arabic, Persian, Sanskrit, Hindi, Urdu, Economics, Philosophy, History, Political Science, Sociology and Public Administration and three papers in Latin. There is a *viva voce* at the examination in English Literature and Modern European Languages.

The minimum pass marks in all the subjects are 36 per cent of the aggregate marks. Candidates who obtain 60 per cent or more of the aggregate are placed in the First Division and those who obtain between 60 and 48 per cent in the Second Division.

Bachelor of Science.—Candidates are examined in either of the following subjects :—

(a) Physics, (b) Chemistry, (c) Mathematics, (d) Zoology (e) Botany, (f) Geology, (g) Home Science, (h) Geography, (i) Biochemistry and (j) Microbiology.

Provided that no candidate is allowed to take any subject, unless he has passed an examination in that subject in the Intermediate in Science or any other examination recognised as qualifying for admission to a degree course. There are two papers and a practical examination in each subject except Mathematics in which three papers are set. The candidates offering the subject of Biochemistry and Microbiology shall also offer Chemistry as one of the optional subjects.

A candidate may, at his option, take General English as an extra subject in which there are two papers.

The minimum for a pass in all subjects is 33 per cent. There are three divisions : the First Division consists of those who obtain 60 per cent or more of the aggregate, the Second of those who obtain 45 per cent or more and the Third of those who obtain the minimum pass marks in each subject.

Master of Science.—Candidates must offer one of the following subjects :—(a) Mathematics, (b) Physics, (c) Chemistry, (d) Botany, (e) Zoology and (f) Geology. At the Previous examination there are three papers and a practical examination in Physics, Botany, Zoology, Geology and Chemistry. In Mathematics the examination consists of four papers. At the Final examination four papers are set in Mathematics, three papers in Zoology, Physics and Geology and two papers and a thesis or Special Paper in Chemistry and Botany with a practical examination in each subject except Mathematics.

The minimum for a pass is 36 per cent in each subject, 60 per cent or more of the aggregate places a candidate in the First Class and 48 per cent or more in the Second Class.

PROFESSIONAL EXAMINATIONS

Bachelor of Education.—Candidates are examined in the following subjects :—

1. Principles of Education and Educational Sociology
2. Psychology of Education.
3. History of Education.
4. Methods of Teaching : (a) General Methods,
(b) Special Methods
5. Educational Administration and School Hygiene.
6. Practical skill in Teaching.

A candidate may in addition offer a special course in the methods of teaching in one of the following subjects:—

(a) English, (b) A Modern Indian language, (c) Geography, (d) History, (e) Social Studies, (f) Mathematics, (g) Physics and Chemistry, (h) Domestic Science, (i) General Science, (j) Physical Education, (k) Basic Education, (l) Experimental Education, (m) Social Education, (n) Rural Education, (o) Arts and Crafts, (p) Civics, (q) Sanskrit and (r) Commerce.

The minimum for a pass is 36 per cent with a minimum of 25 per cent in each paper; 60 per cent or more of the aggregate places a candidate in the First Division and 48 per cent or more, in the Second Division

Master of Education.—The examination for the degree of M.Ed. is held in the following papers:—

A. *Compulsory* :

PART I

Paper I—Philosophy of Education.

Paper II—Advanced Educational Psychology

B. *Optional* :

Papers III & IV—Two papers in one of the following areas of specialization:—

1. Advanced Educational Philosophy
2. Advanced Psychology.
3. Psychology of Childhood and Adolescence.
4. Experimental Education.
5. Vocational and Educational Guidance.
6. Educational Administration including Supervision and Finance.
7. (A) History of Education—Indian, and
(B) History of Education—Western.
8. Comparative Education.
9. Educational Sociology.

PART II

Dissertation.

Minimum pass marks in each paper and the Dissertation is 36 per cent and in the aggregate 40 per cent. Those obtaining 60 per cent of the aggregate mark, or more are placed in the I class; and the rest in the II class.

Bachelor of Laws.—The subjects of the Previous examination are :
(1) Equity with special reference to the Laws of Torts and Specific Relief, (2) The Law of Contracts, (3) The Law of Easements and Torts, (4) The Law of Evidence, (5) Criminal Law and Procedure, (6) Consti-

tutional Law, and (7) Jurisprudence. The following are the subjects for the Final Examination: (i) Civil Procedure including Principles of Pleading and Limitation, (ii) The Law relating to the Land Tenures, Rent and Revenue in Rajasthan, (iii) Hindu Law with the statutory modifications thereof, (iv) Mohammedan Law, with the statutory modifications thereof, (v) The Law relating to transfer of Property, including the Principles of Equity in so far as they relate to the subject, (vi) Public International Law, or Private International Law and (vii) Company Law and Income-Tax Law.

The examination is conducted by papers. The minimum for a pass is 36 per cent in each subject with a minimum of 48 per cent in the aggregate. Those who obtain 60 per cent of the aggregate mark of the Previous and Final combined are placed in the First Class and those obtaining 48 per cent in the Second Class. No class is awarded at the Previous examination.

Master of Laws.—Part I examination is held in the following subjects:—1. Jurisprudence—Analytical and Historical. 2. Legislation, Principle, Method and Interpretation. 3. Legal History of India. 4. Legal History of England. The Part II examination is held in one of the six branches prescribed for the course.

In order to be declared successful at Part I as well as Part II examination, the candidate must obtain 40 per cent of the marks in each paper and 50 per cent marks in the aggregate. Division is awarded on the combined marks of Part I and Part II examination. Candidates who obtain 60 per cent or more of the total marks are placed in the First class and those who obtain not less than 50 per cent marks are placed in the 2nd class.

Bachelor of Commerce.—The following subjects are to be studied at the B.Com. (Prev.) examinations: (i) Languages, (ii) Commerce (Practice), (iii) Commerce (Theory). The subjects to be studied at the B.Com. (Final) are: (i) Languages, (ii) Commerce (Practice), (iii) Commerce (Theory) and one of the following elective subjects with two papers in each: (i) Advance Accountancy, (ii) Advanced Banking, (iii) Actuarial Mathematics, (iv) Trade & Transport, (v) Insurance, (vi) Rural Economics and Co-operation, (vii) Secretarial Practice.

The minimum for a pass is 36 per cent in each paper. Candidates who secure 60 per cent or more of the aggregate are placed in the First Division, those who get 48 per cent or more in the Second Division, and those who secure the minimum marks in each subject in the Third Division.

Bachelor of Medicine and Bachelor of Surgery.—For the First M.B., B.S. examination, candidates are required to pass in (1) Anatomy and (2) Physiology; for the Second M.B., B.S. examination, (1) Pathology

and Bacteriology, (2) Pharmacology including Pharmaco-therapeutics and Toxicology, and (3) Forensic Medicine; and for the Final M.B., B.S. examination, in (1) Medicine including Therapeutics, (2) Preventive and Social Medicine, (3) Surgery including Diseases of Ear, Nose and Throat, (4) Obstetrics and Gynaecology, and (5) Ophthalmology.

Minimum pass marks in each subject are 50 per cent in theory and oral, practical and clinical separately as well as 50 per cent in the aggregate.

Candidates obtaining 75 per cent or more of the marks in any one subject are awarded distinction in that subject, provided they pass the examination in the first attempt.

Post-graduate examinations in Medicine.

Doctor of Medicine.—The examination for the degree of Doctor of Medicine is held in the following branches:—

1. Medicine and Therapeutics.
2. Pathology and Bacteriology.

Master of Surgery.—The examination for the degree of Master of Surgery is held in the following branches:—

1. General Surgery.
2. Ophthalmology.
3. Obstetrics and Gynaecology.

Master of Science (Medical Groups).—The examination for the degree of Master of Science (Medical Group) is held in the following branches:—

1. Anatomy.
2. Physiology.
3. Pharmacology.

The examination for M.D. and M.S. is held in two parts, i.e., Part I and Part II, of which Part I is held twice a year. M.Sc. (Med.) examination is held once in a year. Only such candidates whose theses are approved can take the Final examination.

Candidates are approved by the examiners and are declared to have passed the examination if they have shown an adequate knowledge in all the subjects of the examinations. All the other candidates are deemed to have failed in the examination.

B.V.Sc. & A.H. examination.—First B.V.Sc. & A.H. examination is held in the following subjects:—

- (1) Animal Husbandry, Part I; (2) Anatomy, Part I; (3) Riding and Shoeing; (4) Histology and Embryology; and (5) Physiology Part I.

The subjects for the Second examination are as follows :—

(1) Animal Husbandry, Part II; (2) Anatomy, Part II; (3) Physiology, Part II; and (4) Materia Medica.

The subjects for the Third examination are as follows :—

(1) Parasitology; (2) Pathology and Bacteriology; (3) Animal Husbandry, Part III; (4) Dairy Science and Milk Hygiene; and (5) Clinical Medicine.

Subjects for the Final examination are as follows :—

(1) Animal Husbandry, Part IV; (2) Preventive Medicine and Meat Inspection; (3) Surgery; and (4) Farm Economics and Statistics.

Candidates must obtain for a pass at least 45 per cent of the aggregate marks separately in written and oral, practical or clinical examination, in each subject.

Candidates who have obtained 75 per cent of the marks in any one subject for the First, Second, Third or Final examination shall be awarded distinction in that subject, provided they pass in all the subjects at one time.

Intermediate Examination in Pharmacy.—For the Part I examination, candidates are required to pass in (1) Inorganic and Physical Chemistry, (2) Physics, (3) Biology (Botany and Zoology) and (4) English; for the Part II examination in (1) General Pharmacy, (2) Dispensing Pharmacy, (3) Forensic Pharmacy, (4) Pharmaceutical Chemistry, (5) Pharmacognosy, (6) Anatomy, Physiology, Pharmacology, Hygiene and First Aid.

Minimum pass marks in each subject are 40 per cent and 45 per cent marks in the aggregate. Candidates securing 60 per cent and above in aggregate are placed in the first division and those securing 45 per cent or above in the second division and those obtaining 75 per cent or above in a subject or subjects are declared to have obtained distinction in the subject or subjects. A regular record of both theoretical and practical class work and examinations conducted in an institution imparting such course are maintained for each student and 40 per cent marks in each subject both theory and practical are allotted for these records.

Bachelor of Pharmacy.—For the Part I examination, candidates are required to pass in (1) Inorganic and Analytical Chemistry, (2) Organic Chemistry, (3) A foreign language out of (a) English, (b) French, (c) German, (4) Any two of the subjects (a) Anatomy, Physiology, Hygiene and First Aid, (b) Biology, (c) Mathematics and Practical Physics and (d) Perfumes and Cosmetics; for the Part II examination in (1) Physical Chemistry, (2) Advanced Organic Chemistry. One of

the groups (A) (i) Dispensing Pharmacy, (ii) Forensic Pharmacy, (iii) General Pharmacy, (iv) Pharmacognosy (B) (i) Pharmaceutical Technology, (ii) Pharmaceutical Calculation, (iii) Principles of Economics and Sales Promotion; for the Part III examination in each of the subjects (1) Chemistry of Natural and Synthetic Drugs and Antibiotics, (2) Pharmacognosy, (3) Microbiology, (4) Bio-Chemistry, Pharmacology and Toxicology, (5) Food and Water Analysis and (6) Principles of Accounting and Business Administration.

Minimum pass marks for the three examinations are the same as laid down for the I. Pharm. examinations.

Bachelor of Engineering.—Every candidate for the First Examination for the B.E. Degree shall be required to show a competent knowledge of:

1. Mathematics I.
2. Mathematics II.
3. Engineering Chemistry.
4. Engineering Physics I.
5. Heat Engines I.
6. Electrical Engineering I.
7. Civil Engineering I.
8. Practical Geometry and Machine Drawing.

The courses of study for Second Examination for the B.E. Degree shall be separate, (a) Civil Branch, and also for (b) Mining Branch and (c) common only for the Mechanical, Electrical and Tele-Communication branches. A candidate, who after passing the First Examination for the B.E. Degree of the University has attended a regular course of study in an affiliated college for one academic year, shall be eligible for appearing at the Second Examination for the B.E. Degree of (a), (b) or (c) as the case may be.

There will be the following branches of study for B.E. Examination.

- A. Mechanical Engineering.
- B. Electrical Engineering.
- C. Tele-Communication Engineering.
- D. Civil Engineering.
- E. Mining Engineering.

Every candidate for the Second Examination for the B.E. Degree in Mechanical, Electrical and Tele-Communication branches shall be required to show a competent knowledge of:

1. Mathematics III (M. E. T.)
2. Applied Mechanics (M. E. T.)
3. Applied Electronics I.
4. Heat Engines II (M. E. T.)
5. Electrical Engineering II (M. E. T. C MI.)

6. Hydraulics. (M. E. T. C.)
7. Machine Drawing.
8. Workshop Technology.

Every candidate for the Second Examination for the B.E. Degree in Civil Engineering shall be required to show a competent knowledge of :

1. Mathematics III (C.).
2. Mechanics.
3. Strength of Materials and Theory of Structures I (C. MI.).
4. Mechanical Engineering.
5. Electrical Engineering II (M. E. T. C. MI.).
6. Hydraulics (M. E. T. C.).
7. Surveying I (C. MI.).
8. Civil Engineering II.

Every candidate for the Second Examination for the B.E. Degree in Mining Engineering shall be required to show a competent knowledge of :

1. Applied Mechanics (MI.).
2. Strength of Materials and Theory of Structures I (C. MI.).
3. Heat Engines II (MI.).
4. Electrical Engineering II (M. E. T. C. MI.).
5. Surveying I (C. MI.).
6. Geology and Mineralogy.
7. Elements of Mining.
8. General Metallurgy.

A candidate, who after passing the Second Examination for the B.E. Degree of the University, has attended a regular course of study in a particular branch in an affiliated college for one academic year, shall be eligible for appearing at the Third Examination for the B.E. Degree in that branch of study.

Every candidate for the Third Examination for the B.E. Degree in Mechanical Engineering shall be required to show a competent knowledge of :

1. Strength of Materials and Theory of Structures I (M. E. T.).
2. Theory of Machines I.
3. Hydraulics and Hydraulic Machinery.
4. Heat Engines III.
5. Strength of Materials and Theory of Structures II (M.).
6. Workshop Technology and Metallurgy.
7. Electrical Technology.
8. Applied Electronics II.

Every candidate for the Third Examination for the B.E. Degree in Electrical Engineering shall be required to show a competent knowledge of :

1. Mathematics IV.
2. Heat Engines III.
3. Mechanical Technology.
4. Strength of Materials and Theory of Structures I (M. E. T.)
5. Electrical Machinery I.
6. Electrical Circuits and Measurements.
7. Applied Electronics II.
8. Electrical Machine Design.

Every candidate for the Third Examination for the B.E. Degree in Tele-Communication Engineering shall be required to show a competent knowledge of :

1. Mathematics IV.
2. Strength of Materials and Theory of Structures I (M. E. T.).
3. Electrical Technology.
4. Electro-Acoustics.
5. Electrical Circuits and Measurements.
6. Electron Tubes and Circuits I.
7. Engineering Physics II.
8. Line Communication I.

Every candidate for the Third Examination for the B. E. Degree in Civil Engineering shall be required to show a competent knowledge of :

1. Strength of Materials and Theory of Structures II (C.).
2. Structural Engineering I (R. C. C.).
3. Soil and Foundation Engineering.
4. Hydraulics and Hydraulic Machinery.
5. Surveying II.
6. Geology.
7. Structural Engineering II (Steel and General).
8. Roads, Railways and Air Port Engineering.

Every candidate for the Third Examination for the B.E. Degree in Mining Engineering shall be required to show a competent knowledge of :

1. Mining I.
2. Mining II.
3. Mining III.
4. Electrical Engineering III (MI.).
5. Mechanical Engineering.
6. Mining Geology I.
7. Fuels and Assaying.
8. Surveying II (MI.)

A candidate, who after passing the Third Examination for the B.E. Degree (Mechanical Engineering, Electrical Engineering, Tele-Communication Engineering, Civil Engineering or Mining Engineering branches) of the University, has attended a regular course of study in a particular branch in an affiliated college for one academic year shall be eligible for appearing at the Final Examination for the B.E. Degree in that branch of study.

Every candidate for the Final B.E. Examination in Electrical Engineering shall be required to show a competent knowledge of :

1. Theory of Machines II.
2. Heat Engines IV.
3. Automobile Engineering and Refrigeration.
4. Power Plant Engineering.
5. Engineering Production and Metrology.

Every candidate for the Final B.E. Examination in Tele-Communication Engineering shall be required to show a competent knowledge of :

1. Generation and Switchgear.
2. Transmission and Distribution of Power.
3. Electrical Machinery II.
4. Utilisation of Electric Power including Traction.
5. Power Station Practice.

Every candidate for the Final B.E. Examination in Tele-Communication Engineering shall be required to show a competent knowledge of :

1. Electron Tubes and Circuits II.
2. Ultra High Frequency (U. H. F.) Technology.
3. Line Communication II.
4. Radio Transmission and Reception.
5. Wave Propagation.
6. Communication Networks and High Frequency Measurements.

Every candidate for the Final B.E. Examination in Civil Engineering shall be required to show a competent knowledge of :

1. Structural Engineering III (R. C. C.).
2. Structural Engineering IV (Steel and General).
3. Irrigation and Water Power Engineering.
4. Public Health Engineering.
5. Architecture and Town Planning.

Every candidate for the Final B.E. Examination in Mining Engineering shall be required to show a competent knowledge of :

1. Mining IV.
2. Mining V.
3. Mining Geology II.

4. Mineral Dressing.

5. Surveying III.

For a pass, a candidate must obtain :

- (a) 35 per cent in each written paper.
- (b) 60 per cent in each of the Practical and Sessionals.
- (c) 50 per cent in the total Sessionals and
- (d) 50 per cent in the grand total.

Classification is done as follows :

For the First, Second and Third B.E. examinations, First class is awarded if a candidate secures a minimum of 60 per cent marks or more in the aggregate and Second class if he secures a minimum of 50 per cent in the aggregate.

For the Final B.E. examination, marks are totalled up as follows :—

20 per cent of First B.E.	320 Marks
40 per cent of Second B.E.	640 „
60 per cent of Third B.E.	840 „
100 per cent of Final B.E.	1,400 „
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Total	3,200 Marks
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A degree with 'Honours' is awarded if he secures a minimum of 70 per cent of the aggregate or 2,240 marks, First class if he secures a minimum of 60 per cent or 1,920 marks and Second class if he secures a minimum of 50 per cent or 1,600 marks.

Qualifying M.E. examination is held in the following subjects :

- 1. Advanced Mathematics (for all candidates).
- 2. Advanced Physics [for B.E. (Electrical) and B.E. (Tele-Communication) candidates only.]
- 3. Tele-Communication [for (B.E. Electrical) and M.Sc. candidates only.]
- 4. Basic Engineering (for M.Sc. candidates only).

Final M.E. examination.—Candidates are required to offer any two of the following subjects, besides a thesis embodying the results of the research work carried out by him during the course of two years :—

- 1. Electronics Circuit analysis.
- 2. U. H. F. and Microwaves.
- 3. Electro-magnetic waves and radiating systems.
- 4. Advanced communication net works.
- 5. Servomechanism and Automatic control devices.
- 6. Industrial electronics.

7. Electro-acoustics.
8. High frequency measurements.
9. Design and construction of Electron tubes.

For a pass, a candidate is required to obtain a minimum of 50% marks in each written paper and practical, as well as in thesis. No class is awarded at the qualifying examination.

First class is awarded if the candidate secures 70% in the aggregate of the subjects for the Final examination including thesis.

Second class—if the candidate secures 60% marks in the subjects for the Final examination including thesis.

GENERAL

Every candidate excepting those who have already passed the High School Examination or a higher examination with Hindi as one of the subjects or those who had passed the former additional compulsory paper in Hindi, are required to pass Proficiency test in Hindi before receiving his degree.

CONDITIONS OF RE-ADMISSION TO UNIVERSITY EXAMINATIONS

A candidate who has satisfied all the requirements of the prescribed courses of study, including the necessary minimum attendance at an affiliated college, and is certified by the Principal as eligible for admission to an examination and after certification does not join a college is eligible to appear at an examination of the University as an ex-student.

A candidate who has attended a regular course of study in an affiliated college and who has failed once in a University examination, is also eligible to appear at an examination of the University as an ex-student.

A supplementary examination is held in August for candidates who fail in one subject only at the immediately preceding B.A., B.Sc., B.Sc. (Ag.), B.Com. or LL.B. examination and such candidates as desire to take the supplementary examination are provisionally permitted at their own risk to join the next higher class in an affiliated college of the University and count attendance in case they are successful at the supplementary examination. Candidates are declared to have passed the examination, if they secure required minimum pass marks in the subject in which they appear at the supplementary examination. No division is, however, awarded to such candidates. Candidates are required to pass separately in the practical examination, if any. A candidate who desires to enter for an examination under this ordinance, must submit his application to the Registrar in a prescribed form so as to reach him not later than the 15th July each year. The application shall be accompanied by the usual fee prescribed for the examination concerned and the marks fee of Re. 1.

ADMISSION OF TEACHERS, INSPECTORS, LIBRARIANS. WOMEN AND EXTERNAL STUDENTS TO THE EXAMINATIONS OF THE UNIVERSITY

A whole time teacher in an approved educational institution or an Inspector in the Department of Education in Rajasthan is also eligible for admission to the University examinations if he has served continuously as a teacher or an Inspector for 18 months (in the case of B.A. examination) or for eight months (in the case of M.A., M.Com. or B.Com. Previous and Final examination) and if he fulfils certain other special conditions. Provided that in the case of a teacher or an Inspector who has immediately before joining service prosecuted a regular course of study for one academic year in an affiliated college and has been promoted to the next higher class, his minimum period of 18 months' continuous service (for B.A.), as required, may be reduced to eight months by the Syndicate.

Whole-time librarians or library clerks in recognised colleges who possess a Diploma or a Certificate in Library Science are eligible to appear at the examinations of the University if they have immediately preceding the examination worked as librarian or library clerk.

Women candidates residing within the territorial limits of the University are allowed to appear at the examinations of the University without attending regular course of study in an affiliated college.

In-service students are those who are gainfully employed and cannot for valid reasons join colleges as regular students, residing within the territorial jurisdiction of the University and studying in the evening classes of affiliated colleges are allowed to appear at the B.A. and B.Com. examinations only. (i) These in-service candidates are enrolled to attend evening classes which certain colleges are authorised to run. (ii) There shall be a regular and qualified staff possessing the same qualifications as are laid down in the Ordinances for teachers in affiliated colleges with a Principal for evening classes. (iii) The degree or diploma awarded to in-service students shall be distinguished by the words "granted under the University Ordinances laid down for in-service candidates".

NUMBER OF STUDENTS IN THE UNIVERSITY

The number of students Faculty-wise (excluding Intermediate classes) in the affiliated college was as follows in the session 1956-57 :—

<i>Name of Faculty</i>	<i>No. of Students.</i>
1. Arts	.. 2,652
2. Science	.. 1,341
3. Commerce	.. 1,311
4. Law	.. 742

<i>Name of Faculty</i>	<i>No. of Students.</i>	
5. Engineering	..	520
6. Medicine, Pharmaceutics and Veterinary Science	..	820
7. Education	..	314
		<hr/>
Total	..	7,700

RESIDENCE AND HEALTH

The students of the Colleges under the jurisdiction of the University are required to live either in a hostel or with their parents or guardians. The cost of living and the conditions of residence are different in different places, the details of which may be found in the prospectuses of the different institutions issued by the institutions concerned every year.

The Board of Inspection is responsible for the periodical inspection of the hostels attached to each college, which is required to satisfy the Syndicate that arrangements for the residence, health and recreation of students are adequate.

N. C. C. TRAINING

There are four Battalions—one each at Jaipur, Ajmer, Udaipur and Jodhpur, each under a separate commandant; three Independent Companies—one each at Alwar, Bharatpur and Bikaner and four more Units—14th Raj. Medical Coy., 11th Raj. Air Squadron at Jaipur, 10th Raj. Naval Unit at Udaipur and Raj. Battery Unit at Pilani. The University have been granting every year a sum of Rs. 7,750 towards the amenities of the N. C. C. Battalions.

SCHOLARSHIPS AND MEDALS

The following scholarships, besides six Research Scholarships of Rs. 125 p.m. each for two years, have been instituted by the University each tenable for 24 months :

- 3 Scholarships (including one to a woman candidate who stands first among women candidates) of Rs. 16 p.m. each and two scholarships of Rs. 12 p.m. each, awarded on the results of the High School examination.
- 8 Scholarships of Rs. 25 each (2 for Arts, 2 for Science and 2 for Commerce and 1 to a woman candidate who stands first among the women candidates and 1 for Agriculture) awarded on the results of the Intermediate examination.
- 7 Scholarships (2 for Arts, 2 for Science, 2 for Commerce and 1 for Agriculture) of Rs. 40 p.m. each, awarded on the results of the Degree examinations.

- 4 Scholarships for Medicine, 3 tenable for 24, 12 and 12 months of Rs. 30 p.m. each—as a result of the First M.B., B.S., Second M.B., B.S. Examinations of April and Second M.B., B.S. (October) for Rs. 40 p.m. tenable for 3 years as a result of Final M.B., B.S. Examination.
- 7 Scholarships —6 of Rs. 30 p.m. each tenable for 12 months and one of Rs. 40 p.m. tenable for 24 months as a result of 1st, 2nd, 3rd and Final B.E. Examinations.
- 3 Scholarships on the Pharmaceutical side of the Medical Faculty of Rs. 25 each as a result of I.Pharm. Pt. I, Pt. II and B.Pharm. Pt. I Examinations.
- 2 Scholarships—one of Rs. 25 and other of Rs. 40 per month—awarded in the law faculty tenable for 12 and 24 months respectively as a result of LL.B. (Pre.) and LL.B. (F.) Examinations. The scholarships as a result of the LL.B. Final examination is awarded provided the candidate joins for LL.M. course.
- 3 Scholarships of Rs. 25 p.m. tenable for 12 months awarded on the results of 1st, 2nd and 3rd B.V.Sc. Examinations.
- 1 Scholarship of Rs. 40 p.m. tenable for 12 months as a result of B.E. Examination.
- A Gold Medal, called the Chancellor's Gold Medal worth Rs. 250 is awarded annually to a student who stands first at the Post-graduate examinations.

Another Gold Medal, called the A. P. Cox, (Jodhpur) Gold Medal is also awarded annually to the best athlete of the University for the year. Besides there are other Gold Medals, called (1) Seth Sagarmal Khetan Memorial Gold Medal which is awarded annually to a candidate securing the highest number of marks among the first Divisions in Hindi at the M.A. examination, (2) Seth Radha Krishna Khetan Gold Medal, awarded annually to a candidate securing the highest number of marks among the first Divisions in Hindi at the B.A. examination, (3) Mahadevi Khetan Memorial Gold Medal, awarded annually to a woman candidate securing the highest number of marks among the first Divisions in Hindi at the B.A. examination among the women candidates, (4) Jyotirmaya Ghosh Memorial Medal, awarded annually to a candidate securing the highest number of marks in History at the M.A. examination, (5) Dr. Mahajan Gold Medal, awarded annually to a candidate securing the highest number of marks in Mathematics among the first divisions of B.A. and B.Sc. examinations, (6) Prabha Sehroff Memorial Medal, awarded annually to a candidate securing

the highest number of marks in Final B.Pharmacy examination, among the first divisioners, (7) Jethmal Kabra Memorial Gold Medal, awarded annually to a candidate securing the highest number of marks at the B.Com. (Final) examination, (8) Sawai Man Singh Gold Medal for General Proficiency, awarded annually to a candidate securing the highest number of marks at the Final M.B., B.S., examination and passes all the examination in the first attempt, (9) Maharao Bhim Singh Gold Medal for General Proficiency, awarded annually to a candidate securing the second highest number of marks at the Final M.B., B.S. examination and passes all the examinations in the first attempt, (10) Seth Ram Coowar Bangur Gold Medal, awarded annually to a candidate securing the highest number of marks at the B.E. examination in Civil Branch.

EXAMINATIONS HELD IN 1957

The number of candidates for the Intermediate Degree and Post-graduate examinations held in March-April 1957 was 14,852. Of these 3,028 appeared at Intermediate Arts, 1,925 for the Intermediate Science, 1,813 for the Intermediate Commerce, 53 for the Intermediate Science in Agriculture, P. I, 102 for I.Sc. (Ag.) Pt. II, 36 for the Intermediate Pharmacy (Part I and II), 1,949 for the B.A., 514 for the B.Sc., 59 for the B.Sc. (Ag.) (Part I and II), 547 for B.Com. Final, 777 for B.Com. (Prev.), 1,141 for M.A. (Previous and Final), 316 for M.Sc. (Previous and Final), 233 for M.Com. (Previous and Final), 879 for LL.B., 12 for LL.M. Pt. II, 16 for LL.M. Pt. I, 6 for M.E./M.Sc. (Elec.) (Qualifying), 597 for B.E. (Civil, Elec., and Mech.) (F.E., S.E. and B.E.), 317 for B.Ed., 18 for M.Ed., 21 for B.Pharm. Pt. I, 22 for B.Pharm. Pt. II, 14 for B.Pharm. Pt. III, 229 for M.B., B.S. (First, Second and Final), 12 for M.S., 19 for M.D., 3 for M.Sc. (Med.) and 194 for B.V.Sc. & A.H. (First, Second and Third) examinations. The total number of students that appeared as regular students from affiliated colleges was 10,927, the remaining 3,925 appearing as private or non-collegiate.

3,069 candidates appeared at the supplementary examinations held in August 1957 for those who had failed in one subject only at the High School, Intermediate, Degree and LL.B. examinations held in March/April 1957. Of these 2,168 passed.

At the High School examination out of 25,575 candidates registered, 23,528 appeared for the examination and 11,565 passed.

BUDGET AND PROVIDENT FUND

The University is maintained by a contribution from the Government of Rajasthan (b) its own income from examination fees etc. The financial year 1956-57 (April 1956 to March 1957) commenced with an

opening balance of Rs. 5,22,982. The income during the year was Rs. 23,96,875 (Rs. 11,21,547 on account of examination fees, Rs. 3,10,000 contribution from Government of Rajasthan and the remaining amount Rs. 9,65,328 from other sources) as against an expenditure of Rs. 16,64,532. The year closed with a credit balance of Rs. 7,32,343.

The University has a Provident Fund to which every servant of the University holding a permanent substantive appointment drawing a pay of Rs. 30 p.m. or over is required to subscribe at the rate of 8 per cent of his salary per month, the University contributing at the rate of 10 per cent. In the case of those drawing Rs. 500 or above the University contributes at the same rate, viz., 8 per cent.

RECOGNITION OF DEGREES AND EXAMINATIONS OF THE UNIVERSITY BY OTHER UNIVERSITIES, BOARDS AND AUTHORITIES

Almost all the Universities in India and a few abroad have recognised the degrees and examinations of the University. The following Universities and other bodies have granted permanent recognition :—

1. Agra University.
2. Aligarh Muslim University.
3. Allahabad University.
4. Andhra University.
5. Annamalai University.
6. Banaras Hindu University.
(Degrees and Examinations, other than those in the Faculty of Education.)
7. Bihar University.
8. Bombay University.
(Degrees and Examinations other than B.E. (Civil), M.Ed. and M.Com.)
9. Calcutta University.
10. University of Delhi.
(Degrees and Examinations other than those in the Faculty of Engineering.)
11. East Punjab University.
(Degrees and Examinations other than those in the Faculty of Science (Ag.) and LL.M.)
12. Gujarat University.
(Degrees and Examinations other than those in the Medicine, Pharmaceuticals and Veterinary Science, Faculty of B.Sc. (Ag.), M.Ed., LL.M. and M.Com.)
13. Gauhati University.
14. Jammu & Kashmir University.
15. Visva Bharati University.
16. University of Roorkee.

17. University of Poona.
18. Maharaja Sayajirao University of Baroda.
19. Karnatak University.
20. Lucknow University.
21. Madras University.
22. Mysore University.
23. Nagpur University.
24. Osmania University
25. Saur University.
26. Utkal University.

Foreign Universities, Boards and other Bodies (including Indian Boards and Bodies).

1. The General Medical Council of U.K. (from the year 1953).
2. The Medical Council of India.
3. Oxford University.
4. Cambridge University.
5. University of Wales.
6. University of London.
7. Institution of Chartered Accountants in England & Wales.
8. Scottish University Entrance Board.
9. Institution of Engineers (India).
10. Union Public Service Commission (Government of India).
11. U. P. Board, Allahabad.
12. Central Board of Secondary Education, Ajmer.

M.D. (Medicine and Therapeutics), M.D. (Pathology and Bacteriology), M.S. (General Surgery), M.Sc. (Med.), (Physiology) examinations have been recognised by the Medical Council of India. Steps have also been taken for getting permanent recognition of the undernoted examinations of this University from the following Universities, which have accorded provisional recognition or have not yet recognised at all :

1. University of Delhi. (Degrees and Examinations in the Faculty of Engineering.)
2. University of Poona. (Degrees and Examinations in various Faculties have been recognised upto June 1965.)
3. University of Bombay. (Degrees and Examinations other than B.E. (Civil), M.Ed. and M.Com.)
4. Gujarat University. (Degrees and Examinations in the Faculties of Science (Ag.), Medicine and B.E. (Civil), M.Ed. and M.Com.)

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|------------------------------|--|
| 5. Banaras Hindu University. | (Degrees and Examinations in the Faculties of Education.) |
| 6. East Punjab University. | (Degrees and Examinations in the Faculty of Science (Ag.) and LL.M.) |
| 7. University of Roorkee. | B.E. (Civil). |

The following High Courts have recognised the LL.B. Degree of the University.

1. Council of High Court of Judicature at Bombay.
2. Bar Council, High Court, Madras.
3. High Court of Judicature, Allahabad.
4. East Punjab High Court, Simla.
5. High Court of Cochin, Ernakulam (S. India).
6. High Court of Judicature for Rajasthan at Jodhpur.
7. Calcutta High Court.
8. High Court of Judicature at Patna.

High Courts of other States have been moved in the matter and their decision is awaited.

SCALE OF EXAMINATION AND ENROLMENT FEES

	Rs.
(a) For admission to examinations :	
1. B.A.	30
2. M.A. (Previous)	20
3. M.A. (Final)	30
4. B.Sc.	30
5. B.Sc. (Ag.) Part I	25
6. B.Sc. (Ag.) Part II	30
7. M.Sc. (Previous)	20
8. M.Sc. (Final)	30
9. Ph.D.	150
10. LL.B. (Previous)	20
11. LL.B. (Final)	40
12. LL.M. Pt. I	50
13. LL.M. Pt. II	50
14. LL.D.	200
15. B.Com. (Previous & Final)	20. each
16. M.Com. (Previous)	20
17. M.Com. (Final)	30
18. B.Ed.	50
(for appearing in the special paper VI)	
19. M.Ed.	60
20. 1st M.B., B.S.	25
21. 2nd M.B., B.S.	50

	Rs.
22. Final M.B., B.S. ..	60
23. Re-examination in each subject of M.B., B.S. not exceeding the fee prescribed for the full examination ..	15
24. First B.V.Sc. and A.H. examination ..	30
25. Second B.V.Sc. and A.H. examination ..	30
26. Third B.V.Sc. and A.H. examination ..	30
27. Final B.V.Sc. and A.H. examination ..	50
28. Re-examination in each subject of B.V.Sc. and A.H. not exceeding the fee pres- cribed for the full examination ..	15
29. M.D. and M.S. (Part I) ..	75
30. M.D. and M.S. (Part II) ..	150
31. M.Sc. (Med.) ..	100
32. First B.E. ..	50
33. Second B.E. ..	50
34. Third B.E. ..	60
35. Final B.E. ..	75
36. Re-examination in each subject/paper of B.E. examination not exceeding the fee prescribed for the full examination ..	15
37. Qualifying M.E./M.Sc. (Tech.) Electronics ..	75
38. Final M.E./M.Sc. (Tech.) Electronics ..	150
39. I.Pharm. Part I ..	25
40. I.Pharm. Part II ..	30
41. B.Pharm. Part I ..	40
42. B.Pharm. Part II ..	40
43. B.Pharm. Part III ..	40
44. For appearing in one subject at the B.A., B.Sc. or B.Com. Examination ..	15
45. Supplementary B.A., B.Sc., B.Com. Examination ..	30
(b) Miscellaneous :	..
46. Enrolment fee ..	2
47. Fee for the re-totalling of marks ..	10
48. Fee for obtaining marks obtained at a Univer- sity Examination ..	1
49. Migration Certificate ..	5
50. Provisional Certificate ..	2
(Rs. 5 if the application is received direct from the candidate.)	
51. Eligibility Certificate ..	2

RANGOON UNIVERSITY

HISTORY OF EDUCATION

The Rangoon College founded in 1880 was affiliated to the University of Calcutta. In 1920, the University of Rangoon was established, and the Rangoon College, as the University College became one of the two Constituent Colleges, the other being Judson College, founded by the American Baptist Mission. The Medical College, the Teachers' Training College, and the Agricultural College, were later established as Constituent Colleges. There was an Intermediate College at Mandalay. Before 1939, the University Council, the supreme administrative body, and the Senate, the supreme academic body, were dominated by the European Professors. In 1939, with the passing of a University of Rangoon Amendment Act, the Council became representative of national educational interests. One great change introduced by the Amendment Act of 1939 was in the Office of the Chancellor; before, the British Governor of Burma was *ex-officio* Chancellor, but in 1939, that high office was filled by election and the late Hon'ble U Tin Tut, M.A. (Cantab), Barrister-at-Law, and then a member of the Indian Civil Service became the first elected Chancellor.

The University was closed during the war years. At the end of the war in 1945, the University reopened, but as an experimental measure, it became unitary in organization. The Constituent Colleges were abolished, and Faculties took their places. The Intermediate College at Mandalay was raised to the status of a Degree College, and retained as an affiliated College. In place of the old unwieldy Council and Senate, a small Council and Senate were established. Another innovation was in the office of the Rector of the University; the Rector was the academic head of the University, and as the Executive Officer of both the Council and the Senate, he was the chief administrative and academic Officer. The office of Chancellor was again made *ex-officio*, and the Prime Minister became the Chancellor. The experiment was found satisfactory, and the University Amendment Act, 1951, placed the new unitary organization of the University on a permanent basis.

(Note :—Intermediate Colleges have now been established at Moulmein, Kyaukpny and Magwe also.)

Chancellor :

The Hon'ble U Nu, Prime Minister of the Union of Burma.

Vice-Chancellor :

The Hon'ble Justice Dr. Bo Gyi, B.A., B.L., LL.D., Judge of the Supreme Court.

Officers of the University :

The Rector of the University of Rangoon.

Dr. Htin Aung, M.A., D.Litt., Ph.D. (Dublin), LL.B. (Cantab), LL.M. (London), LL.D. (Rangoon, Johns Hopkins, Dublin), Barrister-at-Law.

DEANS OF FACULTIES

<i>Law</i>	— Dr. U Myint, B.A., LL.D., Barrister-at-Law.
<i>Arts</i>	— Professor Ba Nyunt, M.A., F.R.Hist.S.
<i>Science</i>	— Dr. (Mrs.) J. Lynsdale, B.Sc., Ph.D. (London).
<i>Engineering</i>	— Professor T. Ba Hli, D.I.C., M.Sc.Eng. (Lond.), A.M.I.C.E.
<i>Medicine</i>	— Col. Min Sein, M.B., M.R.C.S., M.R.C.P. (London). ..
<i>Education</i>	— (Vacant).
<i>Agriculture</i>	— Professor Aung Thein, M.Sc. (Louisiana), Dip. (Agri.). ..

PRINCIPALS OF COLLEGES

University College, Mandalay.	U Ko Lay, M.Sc. (Lon.), A.I.C., D.I.C.
Intermediate College, Moulmein.	U Toe Aung, M.A.
Intermediate College, Kyaukpyu.	(Vacant). ..
Intermediate College, Magwe.	U Kin Nyun, B.Sc., B.Ed.

REGISTRARS OF THE UNIVERSITY

Finance, Academic & Examination.	U Yu Kin, B.Sc.
Administration.	U Thein Maung, B.Sc., B.L. ..

PROFESSORS OF THE UNIVERSITY

English	— J. Kan Gyi, M.A. (Chicago).
Burmese	— U E Maung, M.A.
Mathematics	— U Aung Hla, M.A. (Cantab), F.R. Astron.S., F.B.I.S., Barrister-at-Law.
Pali	— U Aung Than, M.A.
History & Political Science	— U Ba Nyunt, M.A., F.R.Hist.S.

Far Eastern History	—	Dr. Kyaw Thet, B.A. (Lond.), Ph.D. (Lond.).
Economics	—	Dr. Tun Thin, M.A., Ph.D. (Harvard).
Statistics	—	Dr. R. M. Sundrum, B.A., B.L., Ph.D. (Lond.).
Commerce	—	William Paw, B.A., B.Com., M.B.A. (Harvard).
Geography	--	Dr. Thin Kyi, B.A., B.Ed., Ph.D. (Clark.).
Geology	—	Dr. Tha Hla, Ph.D. (Lond.), D.S.C., A.R.I.C., F.G.S.
Botany	—	Dr. Ko Ko Lay, B.Sc., M.A., Ph.D. (Washington U.).
Zoology	—	Dr. J. Lynsdale, B.Sc., Ph.D. (Lond.).
Physics	—	Dr. Mg Mg Kha, M.Sc., Ph.D. (Lond.), D.I.C., A.Inst.P., F.R.Met.S.
Chemistry	—	U Po Tha, M.Sc.
Philosophy	—	Dr. Hla Bu, M.A., Ph.D. (Lond.), F.P.Bs.S.
Psychology	--	Dr. Hla Thwin, M.A., Ph.D. (Columbia).
Education	--	(Vacant).
Law	—	U Myint, B.A., Barrister-at-Law.
Engineering	—	T. Ba Hli, D.I.C., M.Sc. (Engg.) (Lond.), A.M.I.C.E.
Agriculture	--	U Aung Thein, M.Sc. (Louisiana), Dip. (Agri.).
Medicine	—	Col. Min Sein, M.B., M.R.C.S., M.R.C.P. (Lond.).
Anatomy	—	Dr. D. R. Lewis, M.A., F.R.C.S. (E.).
Physiology	—	Dr. U E, M.B., B.S., D.T.M. & H., M.R.C.S., M.R.C.P.E.
Surgery & Gynaecology	—	Dr. Ba Than, M.B., F.R.C.S.E., F.A.C.S., F.I.C.S. Dr. Daw Yin May, T.P.C., M.B.B.S. (Cal.), M.R.C.S. (Eng.), L.R.C.P. (Lond.), F.R.C.S., F.R.C.P. (E.).
Forestry	--	C. W. D. Kermode, M.A., Dip. For. (Cantab.).
Anthropology & Sociology	—	Dr. Htin Aung, M.A., D.Litt., Ph.D. (Dublin), LL.B. (Cantab), LL.M. (London), LL.D. (Rangoon, Johns Hopkins, Dublin), Barrister-at-Law.

REQUIREMENTS FOR ADMISSION

1. Any person may be matriculated as a member of the University who:—

- (a) is not less than 16 years of age ;
- (b) is certified by an authority approved by the Senate to be of good character and conduct ;
- (c) has attained the standard of general education hereinafter under the Regulations provided for ;
- (d) has paid the prescribed fee or fees ;
- (e) has been enrolled as a student of the University or has registered as a candidate for a University examination under 4-A or 4-B of Chapter VI of the Regulations.

2. No person educated in Burma shall be matriculated without the leave of the Senate, unless he has passed the Matriculation Examination held by the University in the following subjects :—

- (i) English ;
- (ii) Burmese ;

provided that, with the approval of the Senate, a person may be matriculated who has not passed in Burmese but has passed in another language ;

- (iii) Mathematics (including Arithmetic) ;

- (iv) Two optional subjects chosen from the following list:—

(1) French, (2) German, (3) Pali, (4) Latin, (5) Additional Mathematics, (6) History, (7) Geography, (8) Physics, (9) Chemistry, (10) Botany & Zoology, (11) General Science, (12) Economics of Co-operation, and (13) Elementary Accountancy.

3. The standard of general education referred to in Regulation 1 (c) is sufficiently evidenced by passing any of the following examinations :—

- (1) The Matriculation Examination of any University of Great Britain and Ireland.
- (2) The Oxford Senior Local Examination.
- (3) The Cambridge Senior Local Examination.
- (4) The School Certificate Examination held by the Oxford and Cambridge Schools' Examination Board.
- (5) *Any other examination approved for the purpose by special order of the Senate.

Provided that in the cases referred to in (2), (3) and (4), the applicant has passed in English, Mathematics and two optional subjects specified in Regulation 2 (iv).

* Those who pass the American High Schools come under (5).

THE INTERMEDIATE COURSE

After admission to the University, a student has to attend a course of studies stretching over two academic years, and on the completion of the course he takes the Intermediate Examination.

Therefore, the Intermediate Class is sub-divided into two classes, the 1st year Intermediate and the 2nd year Intermediate.

For the Intermediate, a student has to offer two compulsory subjects, English and Burmese, and three optional subjects chosen from one of the following groups :—

Group A—Arts.

Optional Burmese, Pali, a Modern European Language, History, Logic, Economics, Geography, Mathematics, Buddhistic Studies, and Commerce.

Group B—Science.

Mathematics, Geography, Geology, Physics, Chemistry, Biology, and Anthropology.

A student who wishes to proceed to the B.A. degree chooses his optionals from the Arts Group. A student who wishes to proceed to the B.Com. degree has to offer Commerce, Economics, and any other "Arts" subject. A student who wishes to proceed to the B.Sc. (General) chooses his optionals from the "B" group. A student who wishes to proceed to the B.Sc. (Engineering) has to offer Mathematics, Physics and Chemistry; a student who wishes to proceed to the M.B., B.S. has to offer Physics, Chemistry and Biology, and a student who wishes to proceed to the B.Sc. (Agriculture) has to offer Physics, Chemistry with either Mathematics or Biology.

There is a University examination at the end of the 1st year and promotion to the 2nd year is made on the results of Part A examination. At the end of the 2nd year, the student takes the Intermediate Part B examination held by the University. The following is the schedule of marks in the examination :—

<i>Subject</i>		<i>Total Marks</i>	<i>Part A</i>	<i>Total Marks</i>	<i>Part B</i>	<i>Total Marks</i>
English	4-2 hrs. each	300	2-2 hrs. each	150	2-2 hrs. each	150
Burmese	1-3 hrs.	100	1-3 hrs.	100	1-3 hrs.	100
Mathematics	2-3 hrs. each	200	1-3 hrs.	100	1-3 hrs.	100
Economics	2-3 hrs. each	200	1-3 hrs.	100	1-3 hrs.	100
Pali	2-3 hrs. each	200	1-3 hrs.	100	1-3 hrs.	100
Logic	2-3 hrs. each	200	1-3 hrs.	100	1-3 hrs.	100
History	2-3 hrs. each	200	1-3 hrs.	100	1-3 hrs.	100
Opt. Burmese	2-3 hrs. each	200	1-3 hrs.	100	1-3 hrs.	100

<i>Subject</i>		<i>Total Marks</i>	<i>Part A</i>	<i>Total Marks</i>	<i>Part B</i>	<i>Total Marks</i>
Anthropology	2-3 hrs. each	200	1-3 hrs.	100	1-3 hrs.	100
Physics	2-3 hrs. each	200	1-3 hrs. + P.	67+33	1-3 hrs. + P.	67+33
Biology	2-3 hrs. each	200	2-2 hrs. each + P	67+33	2-2 hrs. each + P	67+33
Chemistry	2-3 hrs. each	200	1-3 hrs. + P.	67+33	1-3 hrs. + P.	67+33
Geography	2-3 hrs. each +P.	200	1-3 hrs. + P.	67+33	1-3 hrs. + P.	67+33
Geology	2-3 hrs. each +P.	200	1-3 hrs. + P.	67+33	1-3 hrs. + P.	67+33
Buddhistic Studies	2-3 hrs. each	200	1-3 hrs.	100	1-3 hrs.	100
French	2-3 hrs. each	200	1-3 hrs.	100	1-3 hrs.	100
German	2-3 hrs. each	200	1-3 hrs.	100	1-3 hrs.	100

There are practical examinations in all subjects of the Science Group.

To gain a pass, a student must obtain a minimum of 40 per cent of the marks in each of his five subjects. A student who gains 75 per cent marks in a subject is awarded a "Distinction" in that subject. Such distinctions, however, are awarded only to very brilliant students.

GENERAL FIRST DEGREES

General First Degrees, as different from Professional First Degrees, in the University of Rangoon are B.A., B.Com. in the Faculty of Arts, and B.Sc. in the Faculty of Science. B.Com., B.A. and B.Sc. degrees are of two kinds, Pass degrees and Honours degrees.

For the B.Com. degree, a student has to attend a course of studies covering two academic years. A B.Com. student takes Part (A) Examination conducted by the University at the end of the 1st year and his promotion to the 2nd year B.Com. class is dependent on the results of the Part A examination. He takes the B.Com. examination conducted by the University at the end of 2nd year.

The following is the schedule of subjects and marks in the examination for the B.Com. Degree:—

B.COM. (General) Part A

<i>Subject</i>	<i>Time</i>	<i>Total Marks</i>
* Business English	2-2 hrs. each	100 each.
Economics	2-3 hrs. each	150 each.
Accountancy I	1-3 hrs.	150

<i>Subject</i>	<i>Time</i>	<i>Total Marks</i>
* English Comp.	2-2 hrs. each	100 each.
Commercial Law I	1-3 hrs.	100
Marketing	1-3 hrs.	100
Business Finance & Commercial Banking	1-3 hrs.	100
Insurance	1-3 hrs.	100

B.COM. (General) Part B

Business English	2-2 hrs. each	100 each.
English Comp.	2-2 hrs. each	100 each.
Economics	2-3 hrs. each	150 each.
Accountancy II	1-3 hrs.	100
Commercial Law II	1-3 hrs.	100
Auditing	1-3 hrs.	100
Management and Administration	1-3 hrs.	100
Production Management	1-3 hrs.	100

B.COM (Accounting) Part A

Business English	2-2 hrs. each	100 each.
Cost Accounting I	1-3 hrs.	100
Commercial Law I	1-3 hrs.	100
Financial Accounting	2-3 hrs. each	100 each.
Auditing I	1-3 hrs.	100
Economics I	1-3 hrs.	100
Management and Administration	1-3 hrs.	100

B.COM (Accounting) Part B

Business English II	2-2 hrs. each	100 each.
Financial Accounting	2-3 hrs. each	100 each.
Cost Accounting II	1-3 hrs.	100
Auditing II	1-3 hrs.	100
Commercial Law II	1-3 hrs.	100
Finance & Personnel Management	1-3 hrs.	100
Economics II	1-3 hrs.	100

B.COM. (Management) Part A

Business English	2-2 hrs. each	100 each.
Economics I	1-3 hrs.	100
Management & Administration	1-3 hrs.	100
Financial Management I	1-3 hrs.	100
Production Management	1-3 hrs.	100

* Alternative

<i>Subject</i>	<i>Time</i>	<i>Total Marks</i>
Transportation & Traffic Management	1-3 hrs.	100
Accountancy I	1-3 hrs.	100
Commercial Law	1-3 hrs.	100

B.COM. (Management) Part B

Business English	2-2 hrs. each	100 each.
Economics II	1-3 hrs.	100
Personnel Management	1-3 hrs.	100
Purchasing and Sales Management	1-3 hrs.	100
Financial Management II	1-3 hrs.	100
Elective Seminar	1-3 hrs.	100
Accountancy II	1-3 hrs.	100
Advance Management (Problems & Cases in Administration)	1-3 hrs.	100

To obtain a pass, a student must obtain a minimum of 40 per cent marks in each subject of the examination. A student who obtains 75 per cent marks in a subject is awarded a distinction, but as in all University Examinations, only very brilliant students are given distinctions.

For the B.A. Pass and B.Sc. Pass degrees, the course of studies extend over two academic years, and there is Part A Examination for promotion to the 2nd year conducted by the University at the end of the 1st year. The student for the B.A. Pass offers the compulsory subject of English with three subjects chosen from the following group:—

English Language & Literature; Burmese Language & Literature; Pali Language & Literature; Modern European History; Modern Far Eastern History, Ancient Far Eastern History; Political Science; Burmese History; Philosophy; Psychology; Economics; Statistics; Anthropology; Geography; Sociology; Buddhistic Studies; Mathematics; French and German, with the restriction that only two "History" subjects (which include Political Science) can be taken by a student.

For the B.Sc. Pass, the student offers the compulsory subject of English Composition, and three from the following group:—

Geography; Mathematics; Physics; Chemistry; Botany; Zoology; Geology; Anthropology; Sociology and Psychology.

Of course, there are practical examinations, in addition to the written examination, for Geography, Anthropology, Sociology and Psychology and the Science subjects. The schedule of subjects and marks is as follows:—

Subjects		Total Marks	Part A	Total Marks	Part B	Total Marks
English Comp.	2-3 hrs. each.	200	2-2 hrs. each.	100	2-2 hrs. each.	100
English Lang.	3-3 hrs. each.	300	2-3 hrs. each.	150	2-3 hrs. each.	150
Pol. Science	do.	300	do.	150	do.	150
Modern History	do.	300	do.	150	do.	150
Far Eastern Hist.	do.	300	do.	150	do.	150
Burmese History	do.	300	do.	150	do.	150
Burmese Lang. Litt.	do.	300	do.	150	do.	150
Pali	do.	300	do.	150	do.	150
Abhidhamma	do.	300	do.	150	do.	150
Philosophy	do.	300	do.	150	do.	150
Statistics	do.	300	do.	150	do.	150
Sociology	do.	300	do.	150	do.	150
Pure Maths.	do.	300	do.	150	do.	150
Applied Maths.	do.	300	do.	150	do.	150
Psychology	do.+P	300	do.+P	100+50	do.+P	100+50
Geography	do.+P	300	do.+P	100+50	do.+P	100+50
Geology	do.+P	300	do.+P	100+50	do.+P	100+50
Physics	do.+P	300	do.+P	100+50	do.+P	100+50
Chemistry	do.+P	300	do.+P	100+50	do.+P	100+50
Botany	do.+P	300	do.+P	100+50	do.+P	100+50
Zoology	do.+P	300	do.+P	100+50	do.+P	100+50
Anthropology	do.+P	300	do.+P	100+50	do.+P	100+50

A student to be awarded the degree must obtain a minimum marks of 40 per cent in each of the four subjects of his examination. If he is very brilliant student he can hope to obtain 75 per cent of marks in a subject and gain a distinction in that subject.

The course for the B.A. and B.Sc. Honours is of three years' duration. In the 1st year, a student joins the 1st year (Pass) Bachelor Class, and in addition, he attends a special course of lectures in the subject in which he takes Honours. At the end of the 1st year, he is given, in addition to the 1st year, Bachelor Test Examination, a special test in the subject of his Honours. To be promoted to the 2nd year Honours Class he must pass in all the subjects of the ordinary 1st year Bachelor Test examination, and must pass in his Honours Probationary Test examination.

In his 2nd year Honours, he follows the specialized course in his Honours subject, and also the compulsory course in English Composition. At the end of his 2nd year Honours, he takes the papers in English Composition of the Bachelor Pass Degree examination. In his 3rd year, he continues with the specialized course in his Honours subject and at the completion of the course, he takes his Honours examination, consisting of eight papers in his Honours subject. Degree with 1st Class Honours, 2nd Class Honours, Division I and II, or Third Class Honours, or Pass Degree is awarded on the results of the Honours examination.

COMPULSORY SUBJECTS

It will be noted from the above that in the Intermediate, English and Burmese are compulsory, and in the General First Degrees, English Composition is compulsory subject.

PROFESSIONAL FIRST DEGREES

On passing the Intermediate, a student may, if he has taken the required subjects at his Intermediate examination, join either the B.Sc. Engineering Class, or B.Sc. Agriculture Class, or the Bachelor of Medicine, Bachelor of Surgery (M.B., B.S.) Class.

The Schedule of subjects and marks is as follows :—

B.Sc. ENGINEERING EXAMINATION

(a) First Examination

<i>Subject</i>	<i>Time</i>	<i>Total Marks</i>
1. Pure Mathematics	3 hrs.	100
2. Applied Mathematics	3 hrs.	100
3. Geometrical & Machine Drawing	4 hrs.	150
4. Electrotechnology I	3 hrs.	125
5. Heat Engines I	3 hrs.	100
6. Building Materials & Construction	3 hrs.	100
7. Elements of Metallurgy	3 hrs.	150
8. Inorganic Chemistry for 1st year Metallurgy, 2nd year & 3rd year Chemical Engineering	3 hrs.	100
9. Architectural Drawing	4 hrs.	100
10. History of Architecture	3 hrs.	100
11. Descriptive Geometry (Architecture)	3 hrs.	100
12. Freehand Drawing (Architecture)	3 hrs.	100
13. Civics (Architecture)	3 hrs.	100
14. Spinning	3 hrs.	100
15. Weaving Mechanisms and Preparation	3 hrs.	100
16. Elementary Design & Cloth Analysis	3 hrs.	100
17. Textile Styling	3 hrs.	100

<i>Subject</i>	<i>Time</i>	<i>Total Marks</i>
18. Workshop Practice (Sessional Work only) (Not for Metallurgy and Architecture)	—	50
19. Practical Chemistry for Metallurgy students	3 hrs.	50

(b) *Second Examination*

1. Pure Mathematics I & II	3 hrs. each	100 each
2. Applied Mathematics I & II	3 hrs. each	100 each
3. Calculus (Architecture & Metallurgy)	3 hrs.	100
4. Heat Engines II	3 hrs.	125
5. Electrotechnology II	3 hrs.	125
6. Strength of Materials	3 hrs.	100
7. Building Construction	3 hrs.	150
8. Surveying	3 hrs.	125
9. Mechanisms	3 hrs.	100
10. Machine and Building Drawing	6 hrs.	150
11. Elements of Mining (Mining & Metallurgy)	3 hrs.	100
12. Organic Chemistry (Chemical Engg.)	3 hrs.	100
13. Physical Chemistry (Chemical Engg.)	3 hrs.	100
14. Industrial Stoichiometry (Chemical Engg.)	3 hrs.	125
15. Services & Equipment (Architecture)	3 hrs.	100
16. Sanitation (Architecture)	3 hrs.	100
17. Architectural Drawing	6 hrs.	200
18. Fuels (Metallurgy)	3 hrs.	150
19. Inorganic Chemistry for 1st year Metallurgy, 2nd Year and 3rd year (Chemical Engg.)	3 hrs.	100
20. Physical Chemistry (Metallurgy)	3 hrs.	100
21. Workshop Practice (Sessional Work only)	—	50
22. Freehand Drawing (Sessional Work only)	—	100

(c) *Third B.Sc. Engineering*

1. Strength of Materials	3 hrs.	125
2. Hydraulics	3 hrs.	125
3. Theory of Structures	3 hrs.	100
4. Surveying	3 hrs.	125
5. Estimating	3 hrs.	100
6. Civil Engineering I, for 3rd & 4th year (Civil)	3 hrs.	100
7. Drawing & Design (Civil)	6 hrs.	150

<i>Subject</i>	<i>Time</i>	<i>Total Mark.</i>
8. Heat Engines III (Mech. & Elect.)	3 hrs.	125
9. Theory of Machine	3 hrs.	100
10. Advanced Electrotechnology for 3rd & 4th Mech.	3 hrs.	125
11. Machine Drawing & Design (Mechanical)	4 hrs.	150
12. Economics	3 hrs.	100
13. Electrical Engineering I — A	3 hrs.	100
14. Electrical Engineering I — B	3 hrs.	125
15. Electrical Engineering I — C	3 hrs.	100
16. Electrical Design (Sessional Work only)	—	50
17. Inorganic Chemistry for 1 year Metallurgy, 2nd & 3rd Year Chemical Engineering	3 hrs.	100
18. Unit Operations I	3 hrs.	100
19. Unit Operations II	3 hrs.	100
20. Inorganic Chemical Technology	3 hrs.	100
21. Organic Chemical Technology	3 hrs.	100
22. Instrumentation (Chemical Engg.)	3 hrs.	100
23. Machine Drawing (Chemical Engg.)	4 hrs.	150
24. Metallurgy (Mining)	3 hrs.	200
25. Geology (Mining)	3 hrs.	100
26. Mines Plant	3 hrs.	100
27. Explosives	3 hrs.	100
28. Practical Inorganic Chemistry	6 hrs.	125

(d) *Final B.Sc. Engineering*

1. Strength of Materials	3 hrs.	125
2. Hydraulics	3 hrs.	125
3. Civil Engineering I for 3rd & 4th year (Civil)	3 hrs.	100
4. Civil Engineering II	3 hrs.	100
5. Theory of Structures & Soil Mechanics	3 hrs.	100
6. Geology	3 hrs.	100
7. Geodesy	3 hrs.	100
8. Practical Geodesy	3 hrs.	50
9. Drawing & Design (Civil)	6 hrs.	150
10. Advanced Electrotechnology (Elect.)	3 hrs.	100
11. Electrical Machines	3 hrs.	125
12. Electrical Switchgears & Measurement	3 hrs.	100
13. Electrical Generation & Distribution	3 hrs.	100
14. Electrical Communications	3 hrs.	100
15. Electrical Design	6 hrs.	150
16. Heat Engines (Electrical)	3 hrs.	100
17. Management & Administration	3 hrs.	100

<i>Subject</i>	<i>Time</i>	<i>Total Marks</i>
18. Heat Engines III (Mechanical)	3 hrs.	100
19. Heat Engines IV (Mechanical)	3 hrs.	125
20. Theory of Machine	3 hrs.	100
21. Advanced Electrotechnology for 3rd & 4th year (Mechanical)	3 hrs.	100
22. Metrology	3 hrs.	150
23. Drawing & Design (Mechanical)	6 hrs.	150

B.Sc. AGRICULTURE EXAMINATION

(a) *First B.Sc. Agriculture*

<i>Subject</i>	<i>No. of Papers</i>	<i>Time</i>	<i>Marks</i>
Agriculture	1 Theory & 1 Pract.	3 hrs. each	200
Agricultural Botany	—do.—	3 hrs. each	200
Agricultural Zoology	—do.—	3 hrs. each	200
Agricultural Chemistry	—do.—	3 hrs. each	200

(b) *Second B.Sc. Agriculture*

Agriculture	1 Theory & 1 Pract.	3 hrs. each	200
Agricultural Botany	—do.—	3 hrs. each	200
Agricultural Chemistry	—do.—	3 hrs. each	200
Entomology	—do.—	3 hrs. for Theory 5 hrs. for Pract. }	200
Mycology	—do.—	3 hrs. each	200

(c) *Final B.Sc. Agriculture*

Agriculture	1 Theory & 1 Pract.	3 hrs. each	200
Agricultural Botany	—do.—	3 hrs. each	200
Agricultural Chemistry	—do.—	3 hrs. each	200
Agricultural Mycology	—do.—	3 hrs. each	200
Agricultural Engineering	—do.—	3 hrs. each	200

B.Sc. SERICULTURE EXAMINATION

(a) *First B.Sc. Sericulture*

Agriculture	1 Theory & 1 Pract.	3 hrs. each	250
Agricultural Botany	—do.—	3 hrs. each	200
Agricultural Chemistry	—do.—	3 hrs. each	200
Agricultural Entomology	—do.—	3 hrs. each	200
Japanese Language	1 Theory Paper	3 hrs.	100

(b) *Second B.Sc. Sericulture*

Agricultural Botany	1 Theory & 1 Pract.	3 hrs. each	200
Agricultural Chemistry	—do.—	3 hrs. each	200
Plant disease Science & Microbiology	—do.—	3 hrs. each	200
Sericulture	—do.—	3 hrs. each	200
Japanese Language	1 Theory Paper	3 hrs.	100

(c) *Final B.Sc. Sericulture*

<i>Subject</i>	<i>No. of Papers</i>	<i>Time</i>	<i>Marks</i>
Sericulture	1 Theory & 1 Pract.	3 hrs. each	200
Economic Entomology	—do.—	3 hrs. each	200
Sericultural Engineering	—do.—	3 hrs. each	200
Japanese Language	1 Theory Paper	3 hrs.	100

M.B. & B.S.

(a) *2nd, 3rd and Part I Final M.B. & B.S. Examinations*

<i>Subject.</i>	<i>No. of Papers.</i>	<i>Max.</i>	<i>Min.</i>	<i>Remarks.</i>
Organic & Physical Chemistry—				
Theory	1 paper of 3 hrs.	100	}	100
Practical	1 paper of 4 hrs.	100		
Anatomy—				
Written		200	}	200
Pract. & Viva Voce		200		
Physiology—				
Written		200	}	200
Pract. & Viva Voce		200		
Materia Medica & Pharmacology —				
Written		100	}	100
Pract. & Viva Voce		100		
Bacteriology & Medical Zoology—				
Written		100	}	100
Pract. & Viva Voce		100		
Forensic Medicine —				
Written		100	}	100
Pract. & Viva Voce		100		
Hygiene & Public Health—				
Written		100	}	100
Pract. & Viva Voce		100		
General & Special Pathology—				
Written		100	}	100
Pract. & Viva Voce		100		

(b) *Part II Final M.B. & B.S. Examination**For a Pass.*

Medicine—				
Written	200	}	150 }	200
Oral	100			
Clinical	100			

<i>Subject.</i>	<i>No. of Papers.</i>	<i>Max.</i>	<i>Min.</i>	<i>Remarks</i>
Surgery—				
Written		200	} 150 } 50 }	200
Oral		100		
Clinical		100		
Obstetrics & Gynaecology—				
Written		200	} 150 } 50 }	200
Oral		100		
Clinical		100		

Post-Graduate Degrees.—The course for the M.A. or M.Sc. degree is a continuation of the B.A. or B.Sc. Honours course.

The course for the M.A. or M.Sc. is of three years' duration for Pass graduates. They attend the M.A. or M.Sc. qualifying class, and after a course extending over two years, take the M.A. or M.Sc. qualifying examination, which is the same as the B.A. or B.Sc. Honours examination. If they obtain the standard of 2nd Class Honours, they are qualified to proceed to the Final M.A. or M.Sc. Class.

Candidates who have obtained the B.A. or B.Sc. degree with 2nd or 1st Class Honours are admitted to the Final year M.A. Class in the subject in which they obtained the Honours.

The course for the M.A. or M.Sc. degree is of one year's duration. But most Professors advise their students to spend two years (instead of the obligatory one) in their Final M.A. or M.Sc. Class.

The Master's Degree can be obtained either by examination or thesis, or by thesis and examination.

A graduate in Arts and Science may be admitted to the B.L. degree course. The course is of two years' duration, with a University examination at the end of each year. The following is the schedule of subjects and marks:—

Bachelor of Laws—Part A

- (a) Criminal Law, Procedure and Evidence.
- (b) Contract Act, Torts, Sale of Goods, Carriers, Fatal Accidents, Workmen's Compensation & Trade Disputes.
- (c) Personal Law & Law relating to Family Relations including Guardianship of Minors.
- (d) Constitutional Law with special reference to the Constitution of the Union, the Judicial System of the Union and Local Self Government, and
- (e) Principles of Equity, Trusts and Specific Relief Act.

Bachelor of Laws—Part B

- (a) Civil Procedure, Arbitration, Limitation and Court Fees.
- (b) Property Law, Negotiable Instruments, Trade Marks & Designs.
- (c) Insolvency and Succession.
- (d) Partnership, Company Law and Co-operative Societies, and
- (e) Legal History and Elements of International Law.

Bachelor of Education

A graduate in Arts or Science may be admitted to the 1st year course in Education. After completing the course, he takes the University examination for the Diploma in Education. The Diploma qualifies him to teach in the State Schools. A student, after obtaining the Diploma, can proceed to the 2nd year course in Education, at the completion of which he takes the University examination for the Bachelor of Education degree.

The schedule of subjects and marks is as follows:—

Diploma in Education

<i>Subject.</i>	<i>Max.</i>	<i>Min.</i>
Theory and Practice of Education.	100 in each paper.	40 per cent in each paper.
Experimental Education.		
History of Education.		
Outline of General Psychology.		
Experimental Psychology.		
Educational Psychology.		
Method of Teaching.		

There will also be Practical Examination in Teaching.

Bachelor of Education

<i>Subject.</i>	<i>Max.</i>	<i>Min.</i>
Advanced Theory of Education.	100 in each paper.	40 per cent in each paper.
Advanced Experimental Education.		
Advanced History of Education.		
Advanced Psychology.		
Advanced Experimental Psychology.		
Administration & Organization of Schools.		
Practical Examination in Experimental Psychology.		
Viva Voce Examination.		

B.Sc. FORESTRY EXAMINATION*(a) First B.Sc. Forestry*

<i>Subject</i>	<i>Time</i>	<i>Marks</i>
1. Forest Policy & Law	3 hrs.	100
2. Geology (Written) *	3 hrs.	67

<i>Subject</i>	<i>Time</i>	<i>Marks</i>
3. Geology (Practical) *	3 hrs.	33
4. Biology (Written) *	3 hrs.	67
5. Biology (Practical) *	3 hrs.	33
6. Soil Science	2 hrs.	100

(b) *Second B.Sc. Forestry*

1. Entomology (Written)	3 hrs.	67
2. Entomology (Practical)	3 hrs.	33
3. Surveying & Drawing (Written)	3 hrs.	67
4. Surveying & Drawing (Practical)	3 hrs.	33
5. Forest Engineering	3 hrs.	100
6. Statistics	2 hrs.	100

(c) *Final B.Sc. Forestry*

1. Silviculture (2 Papers)	2 hrs. each.	200
2. Utilization	3 hrs.	100
3. Management	3 hrs.	100
4. Botany (Theory) *	3 hrs.	67
5. Botany (Practical) *	3 hrs.	33
6. Mycology & Ecology (Theory)	3 hrs.	67
7. Mycology (Practical)	3 hrs.	33
8. Oral	—	—

(*) Students who have passed any of these subjects in the Intermediate Course will not be required to appear for examination in the subject or subjects. They will, however, attend special classes in the other subjects and will be required to appear for an examination in them.

B.Sc. (APPLIED PHYSICS) PART A

<i>Subject</i>	<i>Time</i>	<i>Marks</i>
1. Elementary Mechanical Engineering (Theory)	3 hrs.	50
2. Mathematical Physics (Special)	3 hrs.	50
3. Physics (Special) 4 papers	3 hrs. each	50 each
4. Pure Mathematics (Same as B.Sc. Part A) 2 papers	3 hrs. each	150

B.Sc. (APPLIED PHYSICS) PART B

1. Elementary Electrical Engineering	3 hrs.	50
2. Electronics (2 papers)	3 hrs. each	50 each
3. Spectroscopy	3 hrs.	50 each
4. Mathematical Physics (Special) 2 papers	3 hrs. each	50 each
5. X-Rays	3 hrs.	50

- (2) University suspends its activities from 25th December to 4th January (both days inclusive).
- (3) The summer vacation begins on 15th April and ends on 15th June, during which period the staff are engaged in examination work.

UNIVERSITY EXAMINATION

In Arts and Science, the examination is held twice a year—in March and a Supplementary examination in June. All examinations in professional subjects are held once a year in March except in Medicine in which subject half-yearly Examinations are held.

NUMBER OF STUDENTS

1. University of Rangoon	..	9,833
2. University College, Mandalay	..	1,427
3. Intermediate College, Moulmein	..	574
4. Intermediate College, Kyaukpyu	..	60
5. Intermediate College, Magwe	..	184
		<hr/>
		12,068
		<hr/>

Total Number of Volumes in the University Library :

(1) Main Library	..	28,400 Volumes.
(2) Departmental	..	30,256 „

ROORKEE UNIVERSITY

Established in 1847 as an Engineering College, Thomason College of Engineering, Roorkee, the Institution was converted into the Roorkee University, by the Roorkee University Act of 1946, U. P. Act No. IX of 1948 (as amended by Act No. XII of 1949) which received the assent of the Governor on February 7, 1948.

CHARTER AND CONSTITUTION

The University was constituted with a view to provide for the teaching of all branches of Engineering at the Thomason College of Engineering at Roorkee to incorporate it into a unitary, teaching and residential University. No College is affiliated to it.

The authorities of the University are:

The Senate, and

The Syndicate, which is the executive.

The Officers of the University are:

The Chancellor,

The Vice-Chancellor,

The Pro-Vice-Chancellor,

The Registrar, and such others as may be declared by the Regulations to be officers of the University.

LIST OF PERSONNEL

Vice-Chancellor :

Dr. A. N. Khosla, I.S.E. (Retd.), D.Engr., R.P.I. (U.S.A.).

Pro-Vice-Chancellor :

Sri K. N. Kathpalia, I.S.E. (Retd.).

Registrar :

Sri S. S. Sarma, M.A.

Assistant Registrar :

Sri V. N. Kak, M.A.

Assistant Registrar (Exam.) :

Vacant.

Superintendent, University Estate :

Vacant.

Superintendent, Workshop :

Sri A. P. Mathur, B.Sc. (Engg.), A.M.I.E. (India).

University Medical Officer :

Col. S. L. Rikhye.

Accounts Officer :

Sri Sankata Prasad.

P. A. to Vice-Chancellor :

Sri S. S. Srivastava, B Com., LL.B.

National Cadet Corps.

Captain H. S. Joshi, O.C., N.C.C.

Refresher Courses.

Sri A. Sanghi, M.Sc., D.I.I.Sc., A.M.I.E. (Ind.), P.S.E., Assistant Director.

Sri R. N. Bhargava, B.Sc (Eng.), M.A.Sc. (Toronto), Reader in Electrical Engineering.

Sri B. D. Sharma, B.Sc. (Eng.) (BHU), Reader in Mechanical Engineering.

Sri A. K. Srivastava, C.E. (Roorkee), A.M.I.E. (Ind.), Reader in Civil Engineering.

Water Resources Development Training Centre.

Sri K. N. Kathpalia, I.S.E. (Retd.), Deputy Director.

Sri Hakim Rai, I.S.E. (Retd.), Professor (Construction).

Sri K. W. Furnlund, Technical Expert.

Sri H. Foster Smith, Technical Expert.

Sri H. L. Sally, Assistant Director, Technical Publications.

New Construction Division.

Sri Sumer Chand, I.S.E. (Retd.), Executive Engineer.

Sri K. L. Datta, A.R.I.B.A., Architect.

Sri K. C. Kalra, Sub-Divisional Officer.

Sri B. M. Singh, Assistant Engineer.

Sri K. C. Kambo, A.I.I.A.N.D.Arch., Assistant Architect.

Civil Engineering Department.

Professor & Head of the Department :

Sri S. L. Malhotra, I.S.E. (Retd.).

Associate Professors :

Sri S. R. Singh, B.Sc. (Engg.) (Bristol), M.I.E., M.I.S. (I), A.M.A.S.C.E.

Dr. Jai Krishna, B.Sc., C.E. (Hons.), Ph.D. (Engg.) (London), A.M.A.S.C.E., A.M.I.E.

Readers :

Dr. O. P. Jain, B.Sc., C.E. (Hons.), Ph.D. (Lond.), A.M.I.E. (Ind.).
 Sri Bharat Singh, C.E. (Hons.) (Rke.), (on duty leave to U. K.)
 Sri Brij Narain, B.Sc., C.E. (Rke.), A.M.I.E.
 Sri Jagdish Narain, B.Sc., B.E. (Hons.) (Rke.), M.S.C.E. (Purdue, U.S.A.).

Sri P. B. Shahni, B.E., A.M.I.E., A.M.I.S., A.M.I.Mun.E. (Lond.).
 Sri H. D. Chitale, B.E. (Civil), A.M.I.E., M.R.San.I. (Lond.).
 Sri C. P. Kaushik, C.E. (Rke.).

Principal, O. S. School :

Sri N. K. Vaswani, B.Sc. (Eng.), A.M.I.Mun E. (Lond.).

Lecturers :

Sri H. C. Misra, B.E. (Civil) (Rke.).
 Sri A. S. Arya, B.E. (Civil) (Rke.), P.G.Dip. in Structural Engg. (Rke.)
 Sri B. K. Jain, A.M.I.E. (India).
 Sri S. V. Patwardhan, B.E. (Civil).
 Sri S. D. Vidyarthi, B.Sc., B.E. (Civil).
 Sri A. G. Mirajgaokar, B.E. (Civil), P.G.Dip. (Rke.).
 Sri S. K. Mathur, C.E. (Hons.), M.E. (Canada).
 Sri S. P. Gupta, B.E. (Civil) (Rke.).
 Sri H. L. Oswal, B.Sc. (Min.), M.Sc. (Engg.) (Lond.).
 Dr. J. T. Panikar, B.Sc. (Engg.), Ingenieur-Docteur (France).
 Sri J. N. Lamba, B.E. (Civil) (Rke.).
 Sri Raghukul Tilak, B.Sc., B.E. (Civil) (Rke.).
 Sri K. B. Agarwal, B.E. (Civil), P.G.Dip. (Rke.).
 Sri K. Seetha Ramulu, B.E. (Civil), M.Tech. (Kharagpur).
 Sri P. V. Rao, B.E. (Civil).
 Sri S. R. Kshirsagar, B.E. (Civil).
 Sri R. P. Jain, B.S.C.E. (U.S.A.), M.S.C.E. (Urbana), U.S.A.
 Sri H. C. Midha, B.Sc., B.E. (Civil).
 Sri Y. A. Veerinder, B.E. (Civil), P.G.Dip.
 Sri A. R. Chandra Sekaran, B.Sc. (Engg.) (Civil).

Applied Science Group.**Readers :**

Dr. T. G. K. Charlu, B.Sc. (Hons.), M.Sc., Ph.D. (London).
 Dr. Chandrika Prasad, M.Sc., D.Phil. (Oxford).

Lecturers :

Sri K. V. Mittal, M.Sc. (Maths.), M.Sc. (Physics).
 Dr. B. K. Agarwal, M.Sc., Ph.D.
 Dr. B. R. Agarwal, M.Sc., Ph.D. (Lond.), D.I.C., A.R.I.C.
 Sri Bal Krishna, M.Sc.,
 Sri Vijai Kumar, M.Sc.
 Sri S. N. Gupta, M.Sc.

Instructors :

Sri Jai Lal Garg, M.Sc.
Sri Reoti Nandan.
Sri S. S. Garg.
Sri Q. C. Gupta
Sri P. D. Visharad.
Sri N. K. Gupta.
Sri Sarup Chand Jain.
Sri Suresh Chand Jain.
Sri R. K. Jindal.
Sri B. V. K. Lavania, B.Sc.
Sri Satish Chand Jain.
Sri Shyam Lal.
Sri S. N. Singh, M.Sc.
Sri Ram Pratap Pande, B.Sc.

Electrical Engineering Department.

Professor & Head of the Department :

Vacant.

Reader & Acting Head of the Department :

Dr. Z. U. Ahmad, B.Sc. (Hons.), D.I.C., Ph.D. (Engg.) (Lond.),
A.Am.I.E.E., A.M.I.E.E., Assoc.I.Mech.E., M.A.S.E.E.

Readers :

Sri J. L. Jothi, B.Sc. (Engg.), A.M.I.E.
Sri G. K. R. Varma, B.Sc. (Engg. E. & M.), D.I.C. (Lond.).

Lecturers :

Sri S. N. Roy, M.Sc., D.I.I.Sc.
Sri T. S. M. Rao, B.Sc., B.E. (Hons). (On study leave).
Sri P. V. Indiresan, B.Sc. (Hons.), D.I.I.Sc.
Sri N. N. Biswas, B.Sc. (Hons.), D.I.I.Sc., A.I.I.Sc., Grad. I.T.E.
Sri C. V. Govinda Rao, B.Sc., B.E., A.M.I.E., A.M.I.E.E.
Sri D. V. Narke, B.E. (Hons.), P.G.Dip. (Rke.).
Sri D. R. Kohli, B.E. (Elect.) (Rke.).
Sri O. P. Kulshreshtha, B.Sc., B.E. (Elect.) (Rke.).
Sri S. K. Hajela, B.Sc., B.E. (Elect.) (Rke.).
Sri Y. B. L. Raina, B.A., D.F.H. (Lond.), G.I.E.E.

Instructors :

Sri R. A. Vidyarthi.
Sri M. G. Jain.
Sri S. N. Upadhyaya.

Mechanical Engineering Department.

Professor & Head of the Department:

Vacant.

Visiting Professor in Mech. Engineering :

Prof. C. O. Heath.

Readers :

Sri N. L. Gupta, B.Sc. (Eng.), M.Sc. (Purdue, U.S.A.),
A.M.A.S.H.V.E.

Sri Jagdamba Prasad, B.Sc. (Eng.), Dip.R.T.C. (Glasgow),
A.M.I.E.

Sri P. N. Kapoor, Dip.Eng., E.T.H.B.A.

Lecturers :

Sri M. N. Saxena, B.Sc., B.Sc. (Engg.), Met., M.I. & S.I., A.M.I.M.

Sri J. P. Srivastava, B.Sc., B.E. (Mech.) Hons. (RKE), (On study leave)

Sri C. P. Gupta, M.Sc. (Maths.) (Agra), B.E. (Mech.) (RKE.)

Sri Rajendra Prakash, B.Sc. (Agra), B.E. (Mech.), (RKE.)

Sri H. S. Majie, B.E. (Tech.), M.Tech.

Sri L. B. Mankani, B.Sc. (Engg.)

Sri B. P. Agarwal, B.Sc., B.E. (Mech.), (RKE.)

Sri D.P. Garg, B.Sc., B.E. (Mech.), (RKE.)

Sri Jainti Prasad, B.Sc., B.E. (Mech.) (RKE.)

Sri M. L. Khorana, B.Sc., B.E. (Mech.), (RKE.)

Instructors :

Sri K. L. Vasudeva.

Sri M. P. Sharma, B.Sc., A.M.I.E. (India).

Sri B. K. Soneja

Architecture Department :

Sri I. S. Chaudhuri, A.I.I.A., N.D. Arch.

Sri I. K. Puri, A.I.I.A., B.Arch. (Delhi).

Sri R. K. Sahu, A.I.I.A., B.Arch. (Hons.), Kharagpur.

COURSES

Following courses are running for the Engineering Degrees, Diploma and Certificates of the Roorkee University.

I. Degree courses (3 years) :

- (a) Civil Engineering
- (b) Electrical Engineering
- (c) Mechanical Engineering
- (d) Tele-communication Engineering
- (e) Architectural Engineering (of 5 years duration)

Admission qualifications :—Age 17-21 years. Intermediate with Mathematics, Physics and Chemistry of the Board of High School and Intermediate Education, Uttar Pradesh or of any other Board or University in the Indian Union recognised by Government ; Higher School Certificate of the Cambridge University with Physics, Chemistry and Mathematics, Pre-engineering examination of Delhi Polytechnic, B.Sc. examination of the Delhi University with English, Mathematics and Physics or Chemistry, provided that Chemistry or Physics, as the case may be, has been taken in the Higher Secondary examination of the Delhi Board ; B.A. (Hons.) Mathematics of the Delhi University provided Science subjects were taken in the Higher Secondary Examination ; Intermediate Science certificate (with Physics, Chemistry and Mathematics) awarded by the East Punjab University in lieu of Social Service ; Overseer Certificate examination awarded by the Thomason College of Engineering, Roorkee or the University of Roorkee, Draughtsman Certificate Examination awarded by the University of Roorkee ; High School Examination with two years' engineering training in an approved engineering institute, or two years' practical engineering experience approved by the Syndicate ; the second year examination of the National Defence Academy ; The General Certificate of Education Examination of the University of London with Physics, Chemistry and Mathematics at advanced level.

II. *Post-Graduate Courses leading to M.E. Degree :*

The following Post-Graduate Courses were continued :

1. Dam Design, Irrigation and Hydraulics.
2. Structural Engineering including Concrete Technology.
3. Public Health Engineering.
4. Soil Mechanics and Foundation Engineering.
5. Electrical Machine Design.
6. Applied Thermodynamics (Refrigeration and Air Conditioning).

These new courses were introduced during the year viz.

7. Highway Engineering and
8. Applied Thermodynamics—Steam and I.C. Power Engineering.

Admission qualifications : Graduates in Engineering from Roorkee University or from other approved Universities or diploma holders of the former Thomason College of Civil Engineering.

Refresher courses : Of three months duration in selected subjects for the benefit of serving engineers to enable them to keep abreast of the latest advances in the field of engineering.

Research : The University has taken 21 Research Problems of the Council of Scientific & Industrial Research.

Diploma Courses (2 years) :

- (a) Overseer (Civil)
- (b) Overseer (Electrical)
- (c) Overseer (Mechanical)
- (d) Draftsman (Civil)
- (e) Draftsman (Electrical)
- (f) Draftsman (Mechanical)

Admission qualifications : Age 16-21, High School Examination or its equivalent recognised by the Government. Admission to the classes through a competitive examination.

Students on Roll : The total number of students comes to 1,066 in all.

SCHOLARSHIPS

(a) 3 scholarships of Rs. 150/- p.m. each for each Post-graduate course are awarded to Post-graduate students.

(b) Thirty-three scholarships of Rs. 50/- a month are awarded to all the Engineering Classes. Three scholarships in addition are awarded to scheduled caste candidates who qualify in the examination, one in each year in any branch of Engineering. All scholarships are reserved for the students of the Uttar Pradesh.

The award of scholarships in the first year are made on the result of Entrance Examination, that in the second year on the result of the examination at the end of the first year, that in the third year on the result of the second year examination.

The distribution of 33 scholarships in each year is made as follows:—

	Civil	Electrical	Mechanical
I Year	6	3	3
II Year	6	3	3
III Year	5	3	3

(c) There are 64 scholarships of the value of Rs. 25/ per mensem each tenable for the nine months of the University session for the Overseer Classes. In addition four scholarships are awarded to the students of the Scheduled castes, two in each year. Fourteen scholarships are awarded in the first year on the result of the Entrance Examination and fourteen scholarships are awarded in the second year on the results of the first year examination. All scholarships are reserved for the students of the Uttar Pradesh.

(d) The Government of India grant 36 scholarships of Rs. 150/- to Rs. 300/- per month each to Engineer and Overseer and Draftsman students coming from foreign countries.

STATEMENT OF ANNUAL ACCOUNTS FOR THE YEAR 1956-57

Head of Receipt.	INCOME		EXPENDITURE		Amount.
	Receipt.	Total.	Head of Expenditure.		
	Rs. A. P.	Rs. A. P.		Rs. A. P.	Rs. A. P.
Opening Balance on 1-4-56:					7,33,375-4-4
Construction Division Account	16,94,738-0-3		Extension and Improvements		2,43,872-11-0
University Account	15,94,479-11-3		Maintenance and Repairs		20,770-14-0
W. R. D. T. C. Account	6,003-3-0		Tools and Plant		3,59,728-3-9
N. C. C. Account	1,809-1-9	32,97,030-0-3	Pay of Officers		2,00,841-5-0
			Pay of Establishment		1,69,334-5-6
U. P. Government Grant in Aids:			Allowances and Honoraria		1,69,927-0-9
Normal Grant	12,48,520-0-0		N. R. Contingencies		14,376-0-0
Development	22,42,000-0-0	34,90,520-0-0	T. C. E. Liabilities		4,86,209-12-5
			Recurring Contingencies		37,540-0-0
Central Grants & Loans		4,24,000-0-0	N. C. C.		1,30,566-10-0
Grant in aid from U. G. C.		3,97,951-0-0	Expenditure for T.A.C.		
Transfer of Grant for share of			Development Expenditure:		
University towards			N. R.	18,421-12-0	
Construction of Swimming			Recurring	38,040-6-0	
Pool, Open Air Theatre, Recreation Hall cum Auditorium (Division Account)	6,667-0-0		Advances against supplies (Division Account)		56,462-2-0
Construction of Pavilion	3,400-0-0	10,067-0-0	Expenditure out of Central Grant and Loans		1,59,773-4-6
		75,041-4-0	Expenditure on Post-Graduate Courses		7,93,054-5-5
C. S. I. R. Grants			Expenditure on Under-Graduate and Diploma Courses		2,14,743-0-0
					4,25,600-2-0
	Carried over	76,94,609-4-3		Carried over	42,16,175-0-8

Head of Receipt.	Receipt.	Total.	Head of Expenditure.	Amount.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Income from Students—University Account :	Brought forward	76,94,609- 4-3	Brought forward	42,16,175- 0-8
Tuition Fee	91,097- 7-0		Books and Journal; Expenditure on	
Hostel Fee	13,510-14-0		W. R. D. T. C. against the grants	
Furniture Fee	7,448-12-6		given by U. G. C.	1,21,134-10-6
Conservancy Fee	679- 4-0		C. S. I. R.	46,696- 9-0
Enrolment Fee	1,476- 0-0		Expenditure to be recovered from W. R. D. T. C.	367- 7-0
Admission Fee	1,905- 0-0		(To be received in University Accounts :	
Examination Fee	96,148- 6-0		Rs. 133-7-6 + Rs. 233-15-6 = Rs. 367-7-0)	
Income from Buildings :		2,12,265-11-6	Closing Balance	37,81,482-13-7
Water Tax (Buildings)	4,311-13-0			
Water Tax (Students Hostel)	3,549- 0-0			
Electric Light	35,202-10-0			
Rent on Buildings	36,187-12-0			
Other Income :		79,251- 3-0		
Special Repair to Survey Instruments	27,106- 5-0			
Miscellaneous Fee (Cost of Forms, Prospectus, Syllabus, etc., Sale of Fuel, Crops, Library fine and Workshop, etc.)	27,466- 0-0			
Testing Fee	1,058- 0-0			
		55,630- 5-0		
Carried over	80,41,756- 7-9		Carried over	81,65,856- 8-9

Head of Receipt.	Receipt.	Total.	Head of Expenditure.	Amount.
	Rs. A. P.	Rs. A. P.		Rs. A. P.
Brought forward	80,41,756- 7-9		Brought forward	81,65,856- 8-9
Refundable Income :				
Receipt of Private funds to be transferred	8-10-0			
Receipt on account of cost of Photos realized from students	234- 8-0			
N. C. C. fine, etc.	396- 5-0			
Consultation fee received from Bhakra after payment of Income Tax	2,100- 0-0	2,739- 7-0		
Division Account :				
Grant received by transferred from University Accounts towards share of University on construction of Swimming Pool, Open Air Theatre, Recreation Hall cum Auditorium (Grant already entered)				
Misc. Receipt for the sale of tender forms, trees, etc.	3,371- 0-6	3,371- 0-6		
Carried over	80,47,866-15-3		Carried over	81,65,856- 8-9

Head of Receipt.	Receipt.	Total.	Head of Expenditure.	Amount.
	Rs. A. P.	Rs. A. P.		Rs. A. P.
W. R. D. T. C. Account:	Brought forward	80,47,866-15-3	Brought forward	81,65,856-8-9
1st instalment of the grant in aid received on 16-8-56 from U. G. C.	1,11,500-0-0			
Rent of Hostel rooms realized	5,737-6-0			
Electric Charges	523-2-0			
Rent realized from trainees to be remitted to Hirakud Dam Project	133-6-0			
Cost of replacement of Crockery Cutlery, etc.	95-11-6			
		1,17,989-9-6		
			Total	81,65,856-8-9
			Total	81,65,856-8-9

SAUGAR UNIVERSITY

TELE { GRAMS : UNIVERSITY, SAGAR.
PHONE : SAGAR - 5.

GENERAL INFORMATION

The University of Saugar was founded by Dr. Sir Hari Singh Gour, Kt., M.A., D.Litt., LL.D., D.Sc., Bar-at-Law, who donated a sum of Rupees Twenty lakhs for the purpose and appealed both to the Central and Provincial Governments to make suitable donations. The Government of Madhya Pradesh made a donation of Rupees Ten lakhs towards the Endowment Fund of the University and made a further grant of Rupees Fifteen lakhs towards its buildings, and equipment. They are also making a grant of Rupees Six lakhs a year to the University towards its maintenance. The Government of Madhya Pradesh have made over to the University land, measuring 2,050 acres, free of cost, at a site selected by the University for the founding of the University town. The new site has been universally acclaimed as a unique one, beautifully picturesque, with a wide panoramic view.

This plateau situate over 2,000' above the sea-level is a self-contained hill on which permanent buildings of the University are under construction. The plans and estimates of these buildings show that at least a sum of Rupees One Crore is necessary for this purpose.

The objective of the University, according to the Founder, is to make it a polytechnic institution, laying special emphasis on Science, Physics, Technology, Engineering and Agriculture, along with a study of Arts and Social Sciences.

A scientific and technological faculty has thus grown with expensive equipment and a number of laboratories to carry out the main purpose and objective of this University. The University is a teaching, residential as well as an affiliating University and has on its rolls 1,241 students.

CONSTITUTION

The following are the authorities of the University:—

- (i) The Court,
- (ii) The Executive Council,
- (iii) The Academic Council,
- (iv) The Committee of Reference,
- (v) The Faculties.

Chancellor :

Dr. Kailash Nath Katju, LL.D., Chief Minister,
Madhya Pradesh, Bhopal.

Pro-Chancellor :

The Education Minister, Madhya Pradesh, Bhopal.

Vice-Chancellor :

Dr. D. P. Mishra, D.Litt.

Treasurer :

Shri G. P. Pande, B.A., LL.B.

Registrar :

Shri Ishwar Chandra, M.A.

*Administrative Officers & Other Staff :**Deputy Registrar :*

Shri P. Bajpai, M.A., LL.B.

Asstt. Registrar (Accounts) :

Shri B. P. Mishra, B.A.

Deans :

<i>Arts</i>	—	Prof. N. D. Bajpeyi, M.A.
<i>Education</i>	—	Shri Atmanand Misra, M.A., B.T., B.Sc., LL.B.
<i>Law</i>	—	Shri B. L. Seth, B.Sc., LL.B.
<i>Science</i>	—	Dr. A. K. Bhattacharya, M.Sc., D.Sc., F.R.M.S.
<i>Proctor</i>	—	Dr. M. P. Sharma, M.A., D.Litt.
<i>Warden</i>	—	Dr. M. L. Misra, M.A., D.Sc.
<i>Lady Warden</i>	—	Smt. V. Bhawalkar, M.A.
<i>Librarian</i>	—	Shri B. L. Pathak, M.A., M.O.L.

TEACHING STAFF :

<i>Chemistry</i>	—	Professor and Head of the Department— Dr. A. K. Bhattacharya, M.Sc., D.Sc., F.N.I.Sc. Readers : (i) Dr. S. N. Banerji, M.Sc., D.Phil. (ii) Dr. S. S. Nigam, M.Sc., Ph.D., D.I.C. (London).
<i>Pharm. Chemistry</i>	—	Reader and Head of the Department— Dr. S. N. Sharma, M.Sc., Ph.D. 9 Asstt. Professors.

<i>Physics</i>	—	Professor and Head of the Department— Dr. D. R. Bhawalkar, M.Sc., Ph.D. (Lon.) Reader—Shri M. P. Shrivastava, M.Sc., D.I.C. (London). 10 Asstt. Professors.
<i>Botany</i>	—	Reader and Head of the Department— Dr. S. B. Saksena, M.Sc., Ph.D. 6 Asstt. Professors.
<i>Zoology</i>	—	Professor and Head of the Department— Dr. D. S. Srivastava, M.Sc., Ph.D. (Belfast), F.R.M.S., F.R.E.S., F.Z.S. (London), F.Z.S.I. 6 Asstt. Professors.
<i>Applied Geology</i>	—	Professor and Head of the Department— Dr. W. D. West, M.A., Sc.D. (Cantab), C.I.E., F.N.I. Reader—Sri T. N. Muthuswami, M.A., F.A.Sc. 3 Asstt. Professors.
<i>Pure Geology.</i>	—	Reader and Head of the Department— Dr. G. W. Chiplonkar, M.Sc., D.Sc. 4 Asstt. Professors.
<i>Mathematics</i>	—	Professor and Head of the Department— Dr. M. L. Misra, M. A. D.Sc. 6 Asstt. Professors.
<i>Anthropology</i>	—	Professor and Head of the Department— Dr. S. C. Dube, M.A., Ph.D. 3 Asstt. Professors.
<i>Geography</i>	—	Professor and Head of the Department— Dr. S. M. Ali, M.A., M.Sc., Ph.D. (Lon.) 3 Asstt. Professors.
<i>Economics</i>	—	Professor—Vacant.
<i>Commerce</i>	—	Readers and Heads— (1) Dr. G. Sahai, M.A., Ph.D. (Lond.) (2) Shri J. N. Mishra, M.Sc. (Lond.) 9 Asstt. Professors.
<i>English</i>	—	Reader and Head of the Department— Shri S. R. Swaminathan, M.A. 7 Asstt. Professors.
<i>Sanskrit</i>	—	Reader and Head of the Department— Dr. R. Upadhyaya, M.A., D.Phil. 2 Asstt. Professors.

Hindi	—	Professor and Head of the Department— Shri N. D. Bajpeyi, M.A. Reader—Dr. R. S. Shukla, 'Rasal', M.A., D.Litt. 7 Asstt. Professors.
Philosophy	—	Reader and Head of the Department— Dr. S. K. Saksena, M.A., Ph.D. (Lond.) 3 Asstt. Professors.
Political Science	—	Professor and Head of the Department— Dr. M. P. Sharma, M.A., D.Litt. Reader—Dr. S. C. Singh, M.A., Ph.D., D.Litt. 3 Asstt. Professors.
History	—	Reader and Head of the Department— Dr. H. L. Gupta, M.A., D.Phil. 3 Asstt. Professors.
Marathi	—	Asstt. Professor and Head of the Department—Shri D. L. Adoni, M.A.
German & French	—	Asstt. Profesor and Head of the Depart- ment—Dr. Thomas Rausch, M.A., D.Phil. (Vienna).
Law	—	Lect. and Head of the Department— Shri G. S. Shrivastava, M.A., LL.B. 3 Lecturers.

RESEARCH

The following number of students were admitted to research degree course in the subject noted against their names during the year under report :

<i>Faculty of Arts :</i>		<i>Faculty of Science :</i>	
Geography	1	Anthropology	.. 1
Hindi	11	Botany	.. 3
History	2	Chemistry	.. 2
Political Science	8	Geology (Applied)	.. 3
Economics	17	Physics	.. 5
English	2	Mathematics	.. 1
Commerce	1		
Philosophy	3		

LIST OF COLLEGES AFFILIATED TO THE UNIVERSITY
OF SAUGAR

<i>Name of College.</i>	<i>Principal.</i>
Raipur :	
College of Science.	Sri U. Mukerji.
Govt. Ayurvedic College.	Sri Sukdeva Sharma.

<i>Name of College.</i>	<i>Principal.</i>
D. S. V. Sanskrit Mahavidyalaya.	Sri S. P. Chaturvedi.
Govt. Training College.	Smt. F. Choudhari.
Govt. College of Mining & Metallurgy.	Dr. V. M. Dokras.
Chhattisgarh College.	Sri J. Yoganandam.
New Arts & Commerce College.	Sri M. V. Ramchandran.
Law College (Durga Edn. So- ciety).	Sri B. B. L. Tiwari.
<i>Rewa :</i>	
Thakur Ranmat Singh College.	Dr. A. P. Mathur.
<i>Chhattarpur :</i>	
Maharaja College.	Dr. H. R. Mishra.
<i>Bilaspur :</i>	
S. B. R. College.	Sri A. L. Pande.
C. M. Dubey Commerce & Arts College.	Sri D. P. Shukla.
<i>Khandwa :</i>	
Govt. Training College.	Sri K. M. Bakshi.
Shree Nilkantheshwar College.	Dr. M. J. Dave.
<i>Raigarh :</i>	
Kirodimal Govt. Polytechnic.	Sri R. G. Buldeo.
<i>Damoh :</i>	
Damaoh Arts College.	Dr. A. P. Singh.
<i>Chirimiri :</i>	
Lahiri College.	Sri J. Lahiri.
<i>Hoshangabad :</i>	
Narmada Mahavidyalaya.	Sri R. L. Sharma.
<i>Burhanpur :</i>	
Seva Sadan Arts College.	Sri G. B. Chouksey.
<i>Narsinghpur :</i>	
Narsingh Mahavidyalaya.	Sri Shakoor Khan.
<i>Mandla :</i>	
Rani Durgavati Mahavidyalaya.	Sri S. G. Somalwar.
<i>Chhindwara :</i>	
Jagannath Mahavidyalaya.	(Vacant).
<i>Rajnandgaon :</i>	
Digvijai Mahavidyalaya.	(Vacant).
<i>Betul :</i>	
Janta Arts College.	Sri M. T. Dharmadhikari.

The following amendment to Statutes or new Statutes be made during the period under report:—

(1) Amendment to Statute 19—Admission to University privileges.

The following has been added as sub-paragraph 2 (B) (Page 71 of the Calendar) :

"That an institution situate beyond the limits of Sagar town applying for the first time for admission to the privileges of the University shall be required to pay to the University such amount of the Travelling and Halting allowances of the persons appointed to make a local enquiry under sub-paragraph (2) of Statute 19, as may be fixed by the Executive Council."

(2) Amendment to Statute 21—Selection Committee for appointment of Teachers.

The existing clause (iii) has been amended in the following manner (Page 74 of the Calendar) :—

"An expert in the subject nominated by the Academic Council for nomination of Lecturers for appointment ;

Provided that in the case of nominations of Professors and Readers for appointment, the number of experts to be nominated by the Academic Council shall be two."

A new clause 21 (2-A) has been incorporated :—

"The Selection Committee for the appointment of Lecturers in Law be constituted as under :"

- (i) The Vice-Chancellor—Chairman.
- (ii) The Dean, Faculty of Law, if he is not the Head of the Dept. of Teaching.
- (iii) One nominee of the Academic Council.
- (iv) One nominee of the Executive Council.
- (v) One nominee of the Chancellor.

The Law Lecturers be appointed on a contract basis for a period of three years on such terms and condition as may be fixed by the Executive Council."

The following clause 5(a) has been added to Statute 21—Selection Committee for appointment of Teachers :

"5(a) The appointment of Temporary Lecturers for periods not exceeding three years shall be made on the nomination of a Committee of Selection constituted for the purpose as follows, namely—

- (i) The Vice-Chancellor—Chairman.
- (ii) The Dean of the Faculty concerned.
- (iii) The Head of the Dept. of Teaching concerned.
- (iv) Nominee of the Chancellor under Statute 21 (1) (v).

(b) *The Vice-Chancellor be empowered to appoint a candidate, as per recommendation of the above Committee, and report to the Executive Council at its next meeting."*

ACADEMIC DEVELOPMENTS

The following courses have been instituted :—

- (i) to impart to the studies of Geology on practical basis, a post-graduate course in Applied Geology has been instituted.
- (ii) for the purpose of imparting a workable knowledge of Hindi, mainly to non-Hindi speaking students and members of the staff, a Diploma course in Hindi has been instituted.
- (iii) work has been taken in hand for the collection of manuscripts in Bundeli so as to carry on researches therein.
- (iv) to cultivate interest in Sanskrit and ancient Indian literature, a Diploma course in Sanskrit has been instituted.
- (v) a post-graduate course leading to the degree of M.Pharm, has been instituted.

EXAMINATION RESULTS

Results of various examinations conducted by this University during the year 1956-57 is shown in Appendix 'A'.

NEW COURSES

The University has instituted D.Litt. and D.Sc. degrees during the year under review.

The University Teaching Departments started teaching 3-Year Degree Courses from July 1956.

The University has introduced a 3-Year Post-Graduate (M.Sc.) course in Applied Geology.

RESEARCH FACILITIES

In accordance with the recommendations of the University Commission Report the University has instituted a new cadre of Research Scholars to be known as Research Fellows in the salary scale of Rs. 250-500.

FINANCES

In addition to the maintenance grant of Rs. 8 Lacs the following grants were received from the Madhya Pradesh Government :—

- | | | |
|------------------------------------|----|-------------|
| (i) For Building | .. | Rs. 6 Lacs. |
| (ii) To wipe off accumulated debts | .. | Rs. 2 Lacs. |

Expenditure statement for the financial year ending 31-3-57 (with sources of income) is shown in the Appendix 'B'.

APPENDIX 'B'

UNIVERSITY OF SAUGAR

EXPENDITURE STATEMENT FOR THE FINANCIAL YEAR ENDING 31-3-1957 (with sources of income).

Particulars	1	2	3	4	5	6	7	8	9	10
		From Central Government	From State Government	District Boards	Municipal Boards	Fees	Endowment	Other Sources	Total	Expenditure on salaries of teachers already included in the total column (9)
A. Direct charges	83,130	6,77,981	—	5,000	6,02,500	1,03,465	1,70,733	16,42,809	6,23,372	—
B. Indirect charges :										
(a) Building, furniture expenditure.	4,23,683	1,14,081	—	—	—	—	—	7,70,595	13,08,359	—
(b) Scholarship and other concessions.	36,188	360	—	—	—	10,885	1,410	7,274	56,117	—
(c) Hostel charges.	—	7,578	—	—	—	37,444	—	—	45,022	—
(d) Miscellaneous.	7,521	8,606	—	—	—	6,998	—	39,763	62,888	—
Total indirect charges.	4,67,392	1,30,625	—	—	—	55,327	1,410	8,17,632	14,72,386	—
GRAND TOTAL AND INDIRECT.	5,50,522	8,08,606	—	5,000	6,57,827	1,04,875	9,88,365	31,15,195	—	—

Note :—The statement does not include expenditure out of special fund deposits and advances.

APPENDIX 'A'

UNIVERSITY OF SAUGAR—EXAMINATION RESULTS 1956

Examination	Boys						Girls					
	No.	Appeared	No.	Passed	No.	Appeared	No.	Appeared	No.	Passed		
	From Recog-nised Ins-titution	Private	Total	From Recog-nised Ins-titution	Private	Total	From Recog-nised Ins-titution	Private	Total	From Recog-nised Ins-titution	Private	Total
1	2	3	4	5	6	7	8	9	10	11	12	13
Degree & other Equivalent Examinations.												
Arts & Science												
Ph.D. (Arts)	2	—	2	2	—	2						
Ph.D. (Science)	6	—	6	6	—	6						
M.A. (Prev.)	90	66	156	78	46	124	16	19	35	13	18	31
M.A.	500	30	80	49	29	78	11	11	22	11	10	21
M.Sc. (Prev.)	80	13	93	70	7	77	2	—	2	2	—	2
M.Sc. (Final)	70	8	78	64	6	70	5	—	5	5	—	5
B.Pharm.	9	—	9	7	—	7						
B.A.	398	402	800	251	183	434	41	85	126	28	46	74
B.Sc.	182	44	226	121	23	144	6	1	7	5	—	5
M.Ed.	10	1	11	9	1	10						
M.A. in App. Psy.	3	—	3	3	—	3	2	—	2	2	—	2
B.T.	92	1	93	91	1	92	46	—	46	46	—	46
B.T., Basic	16	—	16	16	—	16	4	—	4	4	—	4

Continued—

Continued—

	1	2	3	4	5	6	7	8	9	10	11	12	13
Master of M.E.	1	1	1	2	1	—	1						
Bachelor of C.E. II	30	30	5	35	24	2	26						
Bachelor of E.E.	15	15	—	15	10	—	10						
Bachelor of M.E.	21	21	—	21	20	—	20						
Bachelor of T.C.	25	25	1	26	24	1	25						
Bachelor of Eng. Part I													
C.E.	48	48	5	53	23	1	24						
E.E.	24	24	3	27	10	—	10						
M.E.	28	28	2	30	14	—	14						
T.C.	17	17	1	18	13	—	13	1	—	1	1	—	1
Diploma in French	4	4	—	4	4	—	4						
Diploma in German	3	3	1	4	2	1	3						
Pre. Univ. Arts	93	93	—	93	64	—	64	20	—	20	12	—	12
Pre. Univ. Science	109	109	—	109	63	—	63	7	—	7	7	—	7
Pre. Univ. Commerce	82	82	—	82	70	—	70						
M.A. (Prev.) Geog.	1	1	2	3	1	2	3	—	1	1	—	1	1
M.Sc. (Prev.) Geog.	1	1	—	1		—							
M.Sc. (Prev.) Anth.	2	2	—	2	2	—	2						
M.A. (Final) -do.-	1	1	—	1	1	—	1						
M.Sc. (Prev.) Anth.	2	2	—	2	2	—	2						
M.A. (Prev.) -do.-	1	1	—	1	1	—	1						
M.A. (Final) Geography	2	2	—	2	2	—	2						
M.A. (Final) Ang.	5	5	—	5	5	—	5						
M.Sc. (Final) -do.-	1	1	—	1	1	—	1						

Continued—

Continued—

1	2	3	4	5	6	7	8	9	10	11	12	13
B.V.Sc. I Year	118	—	118	39	—	39						
B.V.Sc. II Year	78	—	78	35	—	35						
B.V.Sc. III Year	66	—	66	30	—	30						
B.V.Sc. IV Year	60	—	60	21	—	21						
M.Com. (Final)	30	1	31	30	1	31						
M.Com. (Prev.)	55	8	63	48	5	53						
B.Com. Part II	133	15	148	108	6	114	1	—	1	1	—	1
B.Com. Part I	184	12	196	155	6	161						
LL.B. (Prev.)	197	99	296	94	51	145	2	1	3	1	1	2
LL.B. (Final)	96	45	141	67	67	31	98					
Jr. Diploma	—	10	10	—	3	3						
Sr. Diploma Khand I	—	5	5	—	2	2						
Sr. Diploma Khand II	—	2	2	—	1	1						
Higher Dip. Khand III	—	1	1	—	1	1						
Diploma Khand I	—	2	2	—	—	—						
Intermediate Arts	289	269	758	309	166	475	146	140	286	120	97	217
Intermediate Sci.	572	78	650	281	33	314	34	2	36	25	2	27
Intermediate Engg.	147	10	157	107	4	111						
Pre. Engineering	20	4	24	17	4	21						
Dip. Certi. Tchg.	98	1	99	97	1	98	49	—	49	49	—	49
Nursery Education							4	—	4	4	—	4
First Dip. in Engg.	251	—	251	91	—	91						
Final Dip. in Engg.	22	—	22	12	—	12						
Inter Dip. in Comm.	306	8	4	228	2	230						
Int. Home Science			31				17	—	17	17	—	17
Bachelor in Home Science								1	1	—	1	1

APPENDIX 'A'—(Contd.)

No. of students and girls appeared and passed in Compartmental and Supplementary Examination 1956.

	BOYS		GIRLS		Remarks
	Appeared	Passed	Appeared	Passed	
1. I.A.	12	8	2	1	All passed in Pass Dn.
2. I.Sc.	32	27	—	—	
3. B.A. (Pass)	26	20	5	5	
4. B.Sc. (Pass)	8	6	—	—	
5. I.Com.	4	4	—	—	
6. B.Com. Part I	1	—	—	—	
7. B.Com. Part II	3	3	—	—	
8. Pre. Engineering	1	1	—	—	
9. I.E.	14	14	—	—	
10. B.E. (Part I)	23	23	—	—	
(a) Civil	9	9	—	—	
(b) Mechanical	7	7	—	—	
(c) Electrical	4	4	—	—	
(d) Tele. Comm.	3	3	—	—	
11. B.E. (Part II)	12	8	—	—	
(a) Civil	5	5	—	—	
(b) Mechanical	1	1	—	—	
(c) Electrical	5	1	—	—	
(d) Tele. Comm.	1	1	—	—	
12. First Dip. Engg.	19	17	—	—	
13. Final Dip. Engg.	2	2	—	—	
14. Pre. Arts	21	12	4	4	
15. Pre. Commerce	6	3	—	—	
16. Pre. Science	33	29	—	—	
17. B.V.Sc. 1st Year	69	27	—	—	
18. B.V.Sc. Inter	51	27	—	—	
19. B.V.Sc. Pre-Final	49	23	—	—	
20. B.V.Sc. Final	40	24	—	—	
21. B.V.Sc. M.B.B.S.	43	24	8	4	
First Year					

SARDAR VALLABHBHAI VIDYAPEETH

HISTORICAL BACKGROUND

The establishment of Sardar Vallabhbhai Vidyapeeth as a statutory University grew out of a novel experiment in the field of higher education. An education society, named the Charutar Vidyamandal, was established in 1947 in Kaira District in the State of Bombay, with the specific purpose of promoting higher education in rural areas. The ultimate object was to relate higher education to the needs of rural re-construction. As a first step, the Charutar Vidyamandal established an Arts and Science College, an Engineering College, and a Commerce College, in the midst of a rural area four miles away from Anand, on the Western Railway, and one mile from Karamsad, the birth-place of the late Sardar Vallabhbhai Patel. The farmers in the neighbouring villages were easily persuaded to donate the land for the building of a new educational campus. A portion of the donated land was returned to the donors in the form of building sites near the Colleges. Of the land retained by the Charutar Vidyamandal, a portion was again converted into building sites and offered on sale. The funds thus raised enabled the Mandal to build an educational township in a rural setting without depending entirely on donations in cash. The township was named Vallabh Vidyanagar after the late Sardar Vallabhbhai Patel, who guided the inception and the execution of the scheme. A college of Agriculture, too, grew up at a small distance from Vallabh Vidyanagar, under the management of another body.

Within eight years of the establishment of the first College at Vallabh Vidyanagar, the conditions were ripe for constituting a separate University, which would be mainly of a residential and teaching type. The Sardar Vallabhbhai Vidyapeeth Act, (Bombay Act No. XL of 1955) was passed in October 1955, and the Chairman of the Charutar Vidyamandal, Shri Bhailalbai D. Patel, L.C.E., who, with the late Shri Bhikhabhai K. Patel, had built the new educational township, was appointed the first Vice-Chancellor on 15th December 1956. The Government of Bombay appointed an officer of the Bombay Educational Service as the first Registrar. The elections to the Senate were held in October 1956, and the other authorities of the Vidyapeeth, namely, the Syndicate, the Faculties and the Boards of Studies, having been constituted in November 1956, the Vidyapeeth was incorporated as a Statutory body on 15th December 1956, a date sacred to the memory of Sardar Vallabhbhai Patel, being the anniversary of his death.

The object with which the building of a centre of higher education in a rural setting was undertaken is incorporated in the preamble to the Sardar Vallabhbhai Vidyapeeth Act :

"Whereas it is necessary to accelerate the process of regeneration of villages by the application of modern arts, sciences and technology to rural requirements ;"

Another distinct feature of the Act is that it has specified Hindi to be the medium of instruction at the Vidyapeeth, though for the time being the particular Section of the Act is held in abeyance, to permit a gradual change over from English to Hindi.

THE CONSTITUTION OF THE VIDYAPEETH

The Senate is the supreme authority of the body. The Syndicate combines both the executive and the academic functions. The Principals of the four constituent Colleges are ex-officio members of the Syndicate, and the managing bodies of these Colleges are also given representation both on the Senate and the Syndicate, with the result that for practical purposes the constituent colleges which for the present are related to the Vidyapeeth as affiliated colleges, can easily function as University Colleges. The Boards of Studies consist of teachers alone in the respective subjects, and the Faculties include a few members of the Senate in addition to the teachers. The method of election is altogether avoided in regard both to the Faculties and the Boards of Studies. There is also a Board of Post-graduate Studies and Research.

OFFICERS AND STAFF OF THE VIDYAPEETH

The Chancellor :

Sri Sri Prakash, B.A., LL.B. (Cantab), Barrister-at-Law, Governor of Bombay.

The Vice-Chancellor :

Sri Bhailalbhai D. Patel, L.C.E.

Members of the Syndicate :

Sri Bhailalbhai D. Patel, L.C.E.

Sri S. S. Bhandarkar, B.A. (Bom. & Lond.), Director of Education, Bombay State Poona, OR

Sri N. R. Trivedi, B.A. (Cantab), Dy. Director of Education, Bombay State, Poona.

Dr. Madhavlal Sukhlal Shah, M.Sc., Ph.D. (Lond.), Principal, Vithalbhai Patel Mahavidyalaya, Vallabh Vidyanagar (Via : Anand), W.R.

Sri Girishchandra Savailal Desai, B.E. (Civil), A.M.I.E., Principal, Birla Visvakarma Mahavidyalaya, Vallabh Vidyanagar (Via : Anand) W.R.

Sri Ramdas Kisordas Amin, M.A. (Bom.), M.Sc. (Eco.) (Lond.), Principal, Bhikhabhai Jivabhai Vanijya Mahavidyalaya, Vallabh Vidyanagar (Via : Anand) W.R.

Dr. Maganbhai Dahyabhai Patel, M.Sc. (Cornell), Ph.D. (Wisc.), Principal, Bansilal Amritlal College of Agriculture, Anand.

Sri Dahyabhai Vallabhbhai Patel, 68, Marine Drive, Bombay.
(Vacant).

Sri Tribhovandas Kishibhai Patel, President, Kaira District Congress Committee, Deshbandhu Printing Press, Anand.

Sri Lilavati Munshi, Raj Bhavan, Lucknow.

Sri Hiralal Maganlal Desai, B.Ag., Honorary Secretary, Charutar Gramoddhar Sahkari Mandal Limited, Vallabh Vidyanagar (Via : Anand) W.R.

Sri Utsava Parikh, B.Sc., M.A., LL.B., President, District Local Board, Nadiad.

Sri Manubhai Bhikhabhai Patel, New Rajpur Mills Co. Ltd., Ahmedabad.

Registrar :

Sri Chimanlal Narandas Patel, M.A.

Assistant Registrar :

Sri Ambalal Jhaverbhai Patel, Barrister-at-Law.

DEANS OF FACULTIES

<i>Arts</i>	— Prof. S. M. Wadia, M.A., Professor of English (V. P. Mahavidyalaya).
<i>Science</i>	— Prof. G. G. Paldhikar, M.Sc., Professor of Physics (V. P. Mahavidyalaya).
<i>Technology including Engineering</i>	— Prof. K. V. Kardile, B.Sc. (Maths. & Physics), B.Sc. (Mech. & Elect.), Professor of Electrical Engineering, Birla Vishvakarma Mahavidyalaya.
<i>Commerce</i>	— Prof. L. V. Gogate, B.S. (N. Carolina, U.S.A.), Professor of Commerce (B. J. Vanijya Mahavidyalaya).
<i>Agriculture</i>	— Prof. P. L. Patel, B.Sc. (Agri.), M.Sc. (Agri.) (Iowa, U.S.A.), Professor of Agricultural Botany, (B.A. College of Agriculture).

NAME OF FACULTIES AND DEGREES IN EACH FACULTY

Degrees :

(1) The Faculty of Arts :

- (i) Bachelor of Arts—B.A.
- (ii) Master of Arts—M.A.

- (iii) Bachelor of Education—B.Ed.
- (iv) Master of Education—M.Ed.
- (2) The Faculty of Science :
 - (i) Bachelor of Science—B.Sc.
 - (ii) Master of Science—M.Sc.
- (3) The Faculty of Technology including Engineering :
 - (i) Bachelor of Engineering—B.E.
 - (ii) Bachelor of Agricultural Engineering—B.E. (Agri. Eng.)
 - (iii) Bachelor of Architecture and Town Planning—
B.E. (Arch. & T.P.).
 - (iv) Master of Engineering—M.E.
 - (v) Master of Agricultural Engineering—M.E. (Agri. Eng.).
- (4) The Faculty of Commerce :
 - (i) Bachelor of Commerce—B.Com.
 - (ii) Bachelor of Commerce (Co-operation)—B.Com. (Co-op.).
 - (iii) Master of Commerce—M.Com.
- (5) The Faculty of Agriculture :
 - (i) Bachelor of Science—B.Sc. (Agri.).
 - (ii) Bachelor of Science (Animal Husbandry & Dairying)—
B.Sc. (A.H.D.).
 - (iii) Bachelor of Science (Veterinary)—B.Sc. (Vet.).
 - (iv) Bachelor of Science (Home Science)—B.Sc. (Home Science).
 - (v) Bachelor of Science (Forestry)—B.Sc. (Forestry).
 - (vi) Bachelor of Science (Rural Services)—
B.Sc. (Rural Services).
 - (vii) Master of Science (Agriculture)—M.Sc. (Agri.).
 - (viii) Master of Science (Animal Husbandry and Dairying)—
M.Sc. (A.H.D.).
 - (ix) Master of Science (Home Science)—M.Sc. (Home Sc.).
- (6) The Faculties of Arts, Science and Agriculture :
Doctor of Philosophy—Ph.D.

Diplomas :

- (1) Teaching.
- (2) Rural Sanitation.
(Civil, Mechanical, Electrical, Agriculture, Automobile).
- (3) Engineering
- (4) Tele-Communication.
- (5) Metallurgy.
- (6) Co-operation.
- (7) Banking.
- (8) Commerce.

CONSTITUENT COLLEGES AND THEIR PRINCIPALS

<i>Colleges.</i>	<i>Principals.</i>
Vithalbhai Patel Mahavidyalaya, (Arts and Science College), Vallabh Vidyanagar, (Via : Anand) W.R.	Dr. Madhavilal Sukhlal Shah, M.Sc., Ph.D. (Lond.), D.I.C. (Lond.).
Birla Vishvakarma Mahavidyalaya, (Engineering College), Vallabh Vidyanagar, (Via : Anand) W.R.	Sri Girishchandra Savailal Desai, B.E. (Civil), A.M.I.E., L.S.G.D.
Bhikhabhai Jivabhai Vanijya Mahavidyalaya, (Commerce College), Vallabh Vidyanagar, (Via : Anand) W.R.	Sri Ramdas Kishordas Amin, M.A. (Bom.), M.Sc. (Eco.) (Lond.).
Bansilal Amritlal College of Agriculture, (Agriculture College), Anand.	Dr. Maganbhai Dahyabhai Patel, M.Sc. (Cornell), Ph.D. (Wisc.).

RESIDENTIAL CHARACTER OF THE VIDYAPEETH

Vallabh Vidyanagar has grown as a purely educational township. The Vidyapeeth has started with the initial advantage of ample residential accommodation for the students and the members of the staff on the campus. Almost all the teachers of the constituent colleges are provided with quarters. The number of students who were offered accommodation in hostels attached to the constituent colleges during 1956-57 was as follows :—

<i>Name of the College.</i>	<i>Total No. of Students.</i>	<i>No. of Students in the Hostels.</i>
V. P. Mahavidyalaya	1,547	865
Birla Vishvakarma Mahavidyalaya	386	352
B. J. Vanijya Mahavidyalaya	405	231
B. A. College of Agriculture	300	275
	<hr/> 2,638 <hr/>	<hr/> 1,723 <hr/>

The Vidyapeeth and the constituent colleges have plans of expanding the available facilities. The Vidyapeeth is offered a loan of Rs. 5,00,000 by the University Grants Commission for building University Hostels, and the constituent colleges will add to the existing Hostels accommodation with loans from the Government. Within a short time, the Vidyapeeth and the constituent colleges together will be able to meet in full the demand for residential accommodation for students.

DEVELOPMENT PLANS OF THE VIDYAPEETH

Soon after the incorporation of the Vidyapeeth, the authorities of the Vidyapeeth set to work on plans of re-organisation and development. It was decided to change over to the three-year degree courses with immediate effect, the existing First Year courses being recast as the Preparatory course. The new three-year degree course came into force in June 1958. The distribution of terms was revised, raising the number of working days in the year to 210.

As a first step towards making the Vidyapeeth a teaching University, plans have been drawn up for the establishment of Post-graduate Departments of the Vidyapeeth for Humanities (including Social Sciences) and Basic Sciences. The most distinctive feature of these Post-Graduate Departments is that they are intended to organise research specially in fields relating to rural re-construction, and, to the extent possible within the frame-work of academic responsibilities, to undertake extension activities and programmes of cultural and social developments in rural areas.

THE VIDYAPEETH LIBRARY

The University library, when fully developed, will have three sections, one for general reading, one to meet the immediate needs of under-graduate students in relation to the prescribed courses of study, and one section to meet the requirements of research students. It will accommodate 550 readers at a time, with free access to books, and possess 75,000 volumes. The Vidyapeeth received a grant of Rs. 30,000 from the University Grants Commission for the purchase of books in Humanities during the year 1956-57.

THE STUDENTS' WELFARE SECTION

It is intended to establish a separate Section in the office of the Vidyapeeth, to organise Students' Welfare activities. The Section will be under the independent charge of a Dean of Students, who will be a person of the status of a Professor. He will be assisted by a Director of Welfare activities. The Section will organise an Employment Bureau, a Foreign Universities Information Bureau, and deal with all matters relating to Physical Education, health, sports, Youth Festivals, social service camps, and will explore ways of establishing personal contacts with students with a view to understanding and solving their personal difficulties.

PHYSICAL TRAINING AND N. C. C.

Physical training was compulsory under the rules of Gujarat University for the first two years in the Faculties of Arts, Science and Commerce. It is now made compulsory by Sardar Vallabhbhai Vidyapeeth for all years up to the first degree examination in each Faculty.

The emphasis will be on mass-drills and similar forms of training calculated to induce habits of disciplined work in groups.

The 9th Bombay Battalion N. C. C. was raised in November 1954 with its Head Quarters at Vallabh Vidyanagar, when the Colleges were affiliated to Gujarat University. 'A' Coy and a Platoon of 'B' Coy are attached to the V. P. Mahavidyalaya, and 2 platoons of 'B' Coy to the B. J. Vanijya Mahavidyalaya, each Platoon consisting of 45 cadets. The V. P. Mahavidyalaya has also the 10th Bombay Girls Troop N. C. C.

The 10th Bombay Engineering Platoons attached to the Birla Vishvakarma Mahavidyalaya have a strength of 120 Cadets, 60 Cadets to a Platoon.

Enrolment in the NCC is voluntary, and no service liability is attached to it. The First Year Arts, First Year Science, and the First year course of the Intermediate Science (Agriculture) examination are converted into the Preparatory Course with effect from the academic year 1957-58, to be followed by the three year Degree courses in the Faculties of Arts, Science, Commerce and Agriculture, and a pre-Professional course with a three year Degree course in the Faculty of Technology, including Engineering. Admission to the Preparatory course will be open to students who pass the Secondary School Certificate Examination conducted by the Secondary School Certificate Examination Board, Bombay State or an examination recognised as equivalent thereto.

The subjects of study for the Preparatory Examination include four Compulsory subjects and optional subjects under four groups, A, B, C and D, of which students are required to select one group. Students who pass the Preparatory Examination will be qualified for admission to the Degree courses in the different Faculties as shown below :—

- (1) With optional subjects in any of the Groups, A, B, C and D. The Faculty of Arts.
- (2) With optional subjects in Group B. The Faculty of Science or the pre-Professional course in the Faculty of Technology, including Engineering.
- (3) With optional subjects in Group C. The Faculty of Commerce.
- (4) With optional subjects in Group D. The Faculty of Agriculture.

COURSES OF STUDIES AND EXAMINATIONS

The Preparatory Examination

The following are the subjects of study :

I Compulsory Subjects

Each Paper of 100 marks

(1) Gujarati

Additional Hindi or any other Modern Indian Languages or Additional English to be offered only by students whose mother tongue is not Gujarati.

(2) Hindi

(3) English

(4) General knowledge with special reference to conditions of rural life.

II Optional Subjects

Candidates may select any one of the following Groups :—

Group A

(1) Logic — 100 Marks.

(2) A classical Indian Language or a Modern European Language other than English — 100 marks.

or

as an alteration to (1) and (2) taken together, Mathematics — Two papers of 100 marks each.

(3) World History or Elements of Sociology — 100 marks.

(4) Descriptive Economics or Indian Constitution — 100 marks.

Group B

<i>Name of Subject</i>	<i>No. of papers</i>		<i>Marks</i>
(1) Physics	One	100	(Theory)
		50	(Practical)
(2) Chemistry	One	100	(Theory)
		50	(Practical)
(3) Biology	One	100	(Theory)
		50	(Practical)
(4) Mathematics	One	100	
(5) Additional Mathematics to be offered by students who intend to seek admission in this Vidyapeeth to the B.E. Degree course or to the B.Sc. Degree course with Mathematics or Physics as the Principal subject.	One	100	

Group C

<i>Name of Subject</i>	<i>No. of papers</i>	<i>Marks</i>
(1) Book-keeping and Commercial Arithmetic	One	100
(2) Elements of Commerce	One	100
(3) Economics & Commercial Geography	One	100
(4) Elements of Civics and Indian Administration	One	100

or

Mathematics

Group D

<i>Name of Subject</i>	<i>No. of papers</i>	<i>Marks</i>
(1) Agronomy and Animal Husbandry	One	100 (Theory) 50 (Practical)
(2) Botany and Zoology	One	100 (Theory) 50 (Practical)
(3) Chemistry	One	100 (Theory) 50 (Practical)
(4) Physics and Mathematics	One	100 (Theory) 50 (Practical)

The courses of studies for all examinations higher than the first year or the Preparatory Examination remain the same as at Gujarat University for the time being, and the Vidyapeeth will conduct these examinations according to the rules of Gujarat University upto the years shown below :—

Name of Examination

Year upto which the examination will be held according to the existing courses of Gujarat University and rules regarding the medium of instruction and examination.

Faculty of Arts :

Intermediate Arts	First half of 1958
B.A. (General and Special)	First half of 1960
M.A.	First half of 1962

Faculty of Science :

Intermediate Science	First half of 1958
B.Sc. (Subsidiary)	Second half of 1959
B.Sc. (Principal)	First half of 1960
M.Sc.	First half of 1962

Faculty of Commerce :

Intermediate Commerce
B.Com.

First half of 1958
Second half of 1960

Faculty of Technology including Engineering :

F.E.
S.E.
B.E. (Civil, Mech. and Elect.)

First half of 1958
First half of 1959
Second half of 1960

Faculty of Agriculture :

F.Sc. (Old Course)
I.Sc. (New) 1st year
2nd year
S.Sc. (Agri.)
B.Sc. (Old and New)
M.Sc.

First half of 1957
First half of 1957
First half of 1958
First half of 1958
First half of 1960
Second half of 1962

The constituent colleges of the Vidyapeeth were upto the date of incorporation of the Vidyapeeth (15-12-'56) affiliated to Gujarat University for the following courses of study, and continue to enrol students for the same :—

(1) V. P. Mahavidyalaya, Vallabh Vidyanagar (1947)

B.A. (Special and General) :—Gujarati, History, Economics and Mathematics.

B.A. (General only) English, Sanskrit and Philosophy and for B.A. Special Degree Examination in English and Sanskrit.

In Science :—B.Sc. — Chemistry, Physics, Mathematics and Botany (Principal and Subsidiary)
B.Sc. Zoology (Subsidiary only)

(2) B.A. College of Agriculture, Anand (1947)

Courses of study leading to the B.Sc. (Agri.) degree examinations.

(3) Birla Vishvakarma Mahavidyalaya, Vallabh Vidyanagar (1948)

Courses of study leading to the B.E. (Civil, Mechanical and Electrical) degree examinations.

(4) B. J. Vanijya Mahavidyalaya, Vallabh Vidyanagar (1951)

Courses of study leading to the B.Com. Degree examination in all compulsory subjects and in the following optional subjects.

- (1) Advanced Accounting and Auditing.
- (2) Banking.

For the courses of study in the Faculties of Arts, Science, Technology, including Engineering, and Commerce, the reader is referred to the provisions of Gujarat University for the year 1957-58.

With the incorporation of Sardar Vallabhbhai Vidyapeeth, the B.A. College of Agriculture at Anand, which was the only College affiliated to Gujarat University in the Faculty of Agriculture, became a constituent college of this Vidyapeeth, and Gujarat University ceased to have the Faculty of Agriculture. But for the time being the courses of study in the Faculty too continue to be the same as they were formerly at Gujarat University. To qualify for the degree of Bachelor of Science (Agriculture), the candidate has to pass three examinations at the University, the Intermediate Examination in Science (Agri.), the Second Examination in Science (Agri.) and the Examination for the Degree of Bachelor of Science (Agri.)

(a) The syllabus for the Intermediate Examination in Science (Agri.) is to be covered during a period of two years. It was divided into the First Year Course in Inter Science (Agri.) and the Second Year Course in Inter Science (Agri.) with the option to candidates to take the examination in one or more subjects of the First Year Course at the end of the first year itself or at the end of the Second Year together with the subjects of the Second Year Course.

The subjects of study include for the First Year course, Languages (English 100 marks, Hindi and another Modern Indian Language jointly 100 marks, and a paper of 100 marks each in (2) Agronomy and Animal Husbandry, (3) Botany—1, (4) Chemistry—1, (5) Mathematics and Biometry, (6) Physics—1, and (7) Zoology, with practicals of 100 marks each except in (5) and Carpentry and Smithy as an additional subject requiring a College Certificate (this course is now replaced by the Preparatory Course); and for the Second Year Course (1) Languages (as for the First Year Course) and a paper of 100 marks each in (2) Agronomy, (3) Animal Husbandry, (4) Botany II, (5) Chemistry II, (6) Soils, (7) General Bacteriology and (8) Physics, with practicals of 100 marks each in all subjects.

For passing the Intermediate Examination in Science (Agri.) candidates have to obtain 40 per cent of the total number of marks obtainable excluding the marks in languages, forty per cent of the marks obtainable in Agronomy and Animal Husbandry, Papers and practicals separately, thirty per cent of the total marks in languages and thirty-three per cent in the remaining subjects, papers and practicals.

(b) *Second year examination in Science: (Agriculture):* Candidates will be examined in (1) Agriculture (3 papers and a practical), (2) Agricultural Chemistry (2 papers and a practical), (3) Agricultural Botany (1 paper and a practical), (4) Entomology (1 paper and a practical), (5) General Bacteriology (1 paper and a practical). In order to pass candidates must obtain 40 per cent of the total marks obtainable, 40 per cent of the marks obtainable in Agriculture,

papers and practical separately and 33 per cent in the remaining subjects, papers and practicals separately.

(c) *Bachelor of Science (Agriculture)* : Candidates will be examined in the following subjects: (1) Agriculture (2 papers and 2 practicals), (2) Veterinary Science (1 paper and a practical), (3) Plant Pathology (1 paper and a practical), (4) Horticulture (1 paper and a practical), (5) Agricultural Economics (1 paper and a practical), (6) Agricultural Engineering (1 paper and a practical). In order to pass the candidates must obtain 40 per cent of the total number of marks obtainable, 40 per cent of the marks obtainable in Agriculture and 33 per cent in the remaining subjects, percentages to be obtained separately in the papers and practicals in each subject. Candidates who obtain 50 per cent of the total on the aggregate of three years are considered to have passed with Honours. Those who obtain 60 per cent of the total on the aggregate of three years are declared to have passed in the first class.

(d) *Master of Science (Agriculture)* : Each candidate for this Degree must be a graduate in Agriculture of not less than 2 years' standing and must have been engaged in the practice of Agricultural work or research in connection with Agriculture for a period of at least 2 years after receiving the Degree in Agriculture. Each candidate must submit a report of work or research of an original character in the Agricultural field subsequent to his graduation. The M.Sc. Degree may be taken (a) by research (b) by written examination and practical work, or by research and examination combined.

SHREEMATI NATHIBAI DAMODAR THACKERSEY WOMEN'S UNIVERSITY

BRIEF HISTORY OF THE UNIVERSITY

It was in 1916, when the First World War was at its climax, that a new era dawned in the history of the world Universities — nay, in the annals of the Education that an Indian Women's University was set up on the lines of the Japan Women's University of Tokyo. The honour of the origin of this University is to be showered on Dr. D. K. Karve, B.A., D.Litt., who is marching on the horizon of life of a century — well lived and well spent in the cause of Education, particularly, for the Women's Education.

Two vital and essential principles, which basically meant to cater the needs of the day, inspired Dr. D. K. Karve to propagate his ideas on ideal footings. The First Principle was the most effective and natural medium of instruction, namely, the mother-tongue of the pupil. He firmly believed that the instruction through the medium of mother-tongue was more responsive and an easy approach to all problems of the educational field could be made in an equally systematic and scientific manner. He also believed that the power of expression through the mother-tongue could be easily developed and mastered too.

The Second Principle which appealed him the most was to have a pointed and well marked differentiation in the courses of study to suit and to fill the needs of a social and cultural life of a woman in the society and other fields of life of an individual and the country.

Dr. D. K. Karve's ideas of education for women on University level with specific provision for Domestic Science, Drawing, Music and Nursing, found unique support from Sir Vithaldas Thackersey. He realised the urgency and necessity of such a cause being sponsored and supported it for the uplift of the society, through higher education of a particular type, for the ambitious women.

Deeply motivated by this admirable cause, his sense of philanthropy inspired in him the generosity to raise the University and he made no hesitation to offer and give a magnificent princely donation of Rs. 15 lacs to put the University on a sound financial footing. Stability and strength succeeded simultaneously and from that day, the University has ceaselessly continued to grow and develop in manifold activities.

Teaching through the mother-tongue, provision of subjects like Domestic Science, Drawing, Painting, Music, Nursing and others, useful

in the routine social and cultural life of women, and its singular character being that of women only, marked a distinct feature from those of other Universities.

To recall the year of its establishment when there were a few students, easy to count on 'fingers' ends, it is a matter of pride mingled with pleasure that this number has to-day multiplied by a thousand to signify its popularity and utility and urgency. It goes on growing from year to year and is likely to expand considerably.

As times rolled on, the University extended its centres all over India and affiliated many institutions with it.

It was till 1947 that the number of graduates who took the Degree of the Bachelor of Arts and the Master of Arts gradually grew to about two thousand.

Silver Jubilee Celebrations in 1941-42, marked a notable year in the history of the University and it was felt that the University would need a bigger accommodation. The generous public of the city and the State readily responded to the appeal for the funds and soon it gave an incentive to plan out an excellent building for the University and College.

The year of Indian Independence brought for the University a new life full of vigour. The sense of nationalism and support to the call of instruction through the mother-tongue brought the University in the deeper know of the Educationists. The University had started and continued to follow the system of instruction through the mother-tongue three decades before, which the other educationists were now trying to make a wide propaganda.

The era of independence in 1947 and thereafter brought a lively life and light in all its aspects. Soon the University authorities began to think in terms of Statutory recognition of the University. It was believed that the Statutory recognition of the University would accord an outstanding outlook and that its status would be raised to a level worth its name.

Discussions and Conferences of the various Committees were held and at last, the Senate decided to move the Government to grant a Statutory Recognition to this University.

Ceaseless and untiring efforts were made to realise this dream of yesterday into a glorious reality of to-day and sincerity of purpose and the creative and constructive aspect with its unique characterisation bore the fruits as cherished.

The University Act 1949 was framed and it went under legislation. Though it was a matter of time, it gave the long cherished Statutory Recognition to the University in 1951. This created a new era in the life of the University. The Shreemati Nathibai Damodar Thacker-

sey Indian Women's University Society ceased to function and the Shreemati Nathibai Damodar Thackersey Women's University commenced functioning from 1951.

Several changes had to be consequently affected from day-to-day.

By this time, the North Wing of the proposed building of the University became ready. At a cost of about Rs. 10 lacs, a spacious and airy, grand and gorgeous building was erected where a large library in the basement, University Office and the Syndicate Hall and the Home Science Laboratory were provided on the ground floor, the first and the second and the third floors were entrusted to the College for running the Arts classes.

It will be in the fitness of things to record the munificent donation of rupees one lac from Shri Chaturbhuj V. Mankarni, the Trustee of Shri Gordhandas Khetsey Trust, and the building was named after Shri Gordhandas Khetsey.

It is confidently trusted that with completion of the South Wing in course of time, the University Offices, the S. N. D. Thackersey College for Women with all its departments in Arts, Nursing, Education and Home Science, together with a fully furnished up-to-date modern library and quite a large hostel to accommodate at least 80 to 100 students will be settled therein.

It will not be out of place to record our deep sense of gratitude to the Central as well as the State Governments, who have encouraged us to carry on our Building Programme by giving us a large grant to the tune of Rs. 2,33,264 and Rs. 7,65,000 respectively.

After the Statutory recognition, the University concentrated its activities only in the following Institutions.

CONSTITUENT COLLEGES & SCHOOLS

S. N. D. Thackersey College for Women, Bombay,
S. N. D. Thackersey College for Women, Poona,
S. N. D. Thackersey Kanyashala, Bombay,
S. N. D. Thackersey Kanyashala, Poona.

AFFILIATED COLLEGES

S. L. U. Gujarat Mahila Pathshala, Ahmedabad,
Maharani Chimnabai Mahila Pathshala, Baroda,
Shri Mahila College, Bhavnagar,
Vidya Mandir, Surat.

COURSES OF STUDIES, EXAMINATIONS AND DEGREES

The University confer the Degrees of Bachelor of Arts and the Master of Arts, the Bachelor of Teaching formerly called the G.A., and the P.A. Degrees and the P.T. Degrees respectively.

A full-fledged Department for the B.T. students was set up in 1952 and full-time lecturers exclusively for the B.T. students have been engaged. Hereafter, the students at Bombay, Baroda, Ahmedabad and Poona, were given facilities to appear for the B.T. Examination through the respective Colleges, as were unlike other classes, no private students were allowed to appear for the said examination.

It is a matter of great gratification that Government so kindly assented to the proposal of the Senate to allow private students to appear for the F.Y.A., S.Y.A., B.A. and M.A. Examinations of the University. This gave an opportunity to those ambitious students, who for some social and financial difficulties could not fill in the regular terms in the College. Of course, some conditions were laid out but they were easy to be fulfilled.

During the year 1953-54, the Diploma Course in Home Science was commenced and simultaneously the courses in the Domestic Science were strengthened so as to bring to the level of Home Science Degree Course.

With a view to fill up the long felt want in the State of Bombay in respect of the Trained Nursing Graduates, the University Authorities have been planning to set up and organise and expand a full-fledged Nursing College and all endeavours are ceaselessly being made to achieve this aim at a very early date,

B.Sc. (Hons.) Nursing Course runs for four years and its first batch had appeared in 1956. The teaching imparted here comprise subjects like English, Basic Science, Physics and Chemistry, Biology and Hygiene, Economics and Sociology, Nursing and the First Aid, Public Health, Medical Administration, besides the required medical subjects.

Here the medium of instruction is English and the students receive their theoretical training at the University under the able guidance of qualified eminent medical luminaries and the practical training and lecture demonstration at the Bombay Hospital.

The University encourages the students to take active parts in Inter-Collegiate and Inter-University Sports, other cultural programmes of music, fine arts, drama, dance and elocution competitions and it is a matter of pride that this University students have won several prizes and trophies as a token of their admiral victories.

The Annual Convocation is generally held in the month of September every year and the eminent personalities of the Nation, in the field of Education or in politics or in society have been invited to deliver the Convocation Address. We are proud to record that the following well-known personalities, namely, His Excellency Raja Maharaj Sing, the then Governor of Bombay and Chancellor of the University, Dr. S. Radhakrishnan, Vice-President of the Indian Union, Dr. C. P.

Ramaswami Aiyer, Vice-Chancellor of the Benaras University, H. E. Dr. Harekrushna Mahtab, the Governor of Bombay and the Chancellor of the University, Smt. Deshmukh, Shri B. G. Kher, and Dr. A. L. Mudaliar, the Vice-Chancellor of the Madras University and others had graced the occasion to deliver the Convocation Address.

A vast field of subjects is provided for the students and the subjects therein are so widely selected that besides the academic subjects, instructions in Elementary Biology and Hygiene, Home Making, Home Management, Child Psychology, Food and Nutrition, Psychology, Cookery, Physiology are imparted to the students and subjects like Music, Drawing and Painting, Ethics and Philosophy, in addition to the usual academic subjects, for the Voluntary Group.

The Home Science Department has found further progress in 1956. The University of Tennessee, under the TCM Scheme, has lent us the free services of Dr. Miss Josephine Staab, as UT/Indian Home Science Consultant, for a period of two years to expand our Home Science Department on a most systematic and scientific lines. She has been a source of inspiration to the teachers in the Home Science Department and she guides and trains them, so as to give an outlook of novelty and broaden vision with characteristic technical insight developed by her in them.

The University authorities are indeed very grateful to the Government of India and to the USA Government in arranging the very useful and inspiring services of an expert in Home Science free of all charges. Besides, two of our teachers are delegated to the University of Tennessee for higher studies, free of all costs. Their knowledge achieved in USA and the experience will, on their return, go a long way to raise the standard of the Home Science Department.

So far it was believed that the three year Degree Course was sufficient to enable the students to appear for the Degree Examination, as the medium of instruction was through the mother-tongue of the pupils.

However, the University Authorities have thought it wise to revise their views in the light of the modern trend of University Education and the Syndicate have recommended to the Senate Three Year integrated Degree Course in addition to the Preparatory Year. Moreover, the Courses have been upgraded and the quality and quantity of subjects and courses have been brought to the level of those of other Universities.

For service purpose, the Government of Bombay have recognised the Degrees of this University on par with the other Universities. The University of Karnatak, the University of Nagpur and the Punjab University and the Vishvabharati University have recognised the Degrees

of this University as corresponding to the degrees awarded by the said Universities.

The Courses for the M.Ed. Degree Examination were introduced in 1955 and the M.Ed. Degree was conferred on the first batch of 10 students in 1956.

Every year, prominent personalities either of the country or of the foreign countries in the field of Education, happen to visit the University and educational discussions are held with them so as to be benefited by their knowledge and experience.

In the end, it may be added that the limited financial resources of the University, are supplemented every year by the Grants from the Central as well as the State Governments and some donation is being received from Donors. Some Donors have donated especially some amount for awarding prizes to students for their gaining highest number of marks in the subjects specified.

The University Authorities have on their Senate and Syndicate members, who take active interest in the matter of education and organization and development of the University.

With more substantial financial assistance from State and Central Governments together with the support from the public, the University Authorities cherish to expand and enlarge its activities into manifold spheres which affect the women and raise and uphold the status of the women in all aspects of life.

EXPANSION PLANS

I. The immediate needs of the University are full-fledged Colleges for :

- (a) Teaching ;
- (b) Nursing : and
- (c) Home Science

with adequate accommodation for well equipped laboratory for each of them.

II. The accommodation and equipment in Research Departments in :

- (a) Sociology ;
- (b) Spoken Languages and dialects of India, particularly that of the State of Bombay including aboriginal areas ;
- (c) Feminism in Asia ;
- (d) Food Nutrition ; and
- (e) Ancient teaching system in the world.

III. Accommodation for a large Library, its equipment and books.

IV. A Hostel for about 500 students for four Colleges and Schools.

All these plans are on the anvil and we have already made a humble beginning but our lofty dream is to set up a full-fledged independent College for each of this faculty.

We trust that in addition to the grant from the Central and the State Governments, the philanthropic public of the city in particular and of the country in general, will extend their co-operation in terms of substantial donation to enable us to carry out our schemes.

We look forward for a more glorious and brighter future, to ameliorate the condition of women in all spheres of life, especially, educational, cultural and social and satisfy the needs of women in all fields of life.

STATEMENT OF CANDIDATES WHO HAVE PASSED THE DEGREE EXAMINATIONS

	B.A.	M.A.	B.T.	M.Ed.
Upto 1950-51	1,453	98	72	Nil
1950-51	133	16	19	"
1951-52	135	32	48	"
1952-53	140	23	107	"
1953-54	196	25	90	"
1954-55	227	27	167	"
1955-56	283	24	201	10
1956-57	289	27	179	Results awaited
Total	2,856	272	883	10

ACADEMIC DETAILS

A student who has passed the Matriculation Examination of any Statutory University or an equivalent examination recognised for the purpose by the Syndicate is admitted to the Arts Course as well as to the Nursing Course.

After graduation, there is a post-graduate M.A. Degree Course consisting of two years, B.Ed. Course consisting of one year and M.Ed. Course consisting of two years after passing the B.Ed. Degree examination.

The total number of students in the academic year 1957-58, in the colleges conducted by and affiliated to the University is as given below :—

(a) Conducted Colleges .—

1. S. N. D. T. College for Women, Bombay	1,500
2. S. N. D. T. College for Women, Poona	202
	— 1,702

(b) *Affiliated Colleges* :—

1. S. L. U. Gujarat Mahila Pathshala, Ahmedabad	282
2. Maharani Chimnabai Mahila Pathshala, Baroda	245
3. Mahila College, Bhavnagar	102
4. Vidya Mandir, Surat	113
	— 742
Grand Total	2,444

Besides 1,750 students have registered their names as Private Candidates to appear for various examinations to be held in 1958.

The University is actively considering the question of setting up a Research Department for Post-Graduate studies. At present, there is provision for Post-Graduate studies on the Arts side and the Teaching side (Education).

There are no special scholarships or freeships for students from other Universities and foreign countries. The University, however, awards at present, 47 prizes or scholarships of various denominations.

This University has so far turned out 2,863 Graduates, 272 M.A.'s and 883 B.T.'s.

CHANCELLORS

(Before the University became a Statutory University—up to 1951)

- 1916 Sir Ramakrishna Gopal Bhandarkar, M.A., Ph.D.
- 1920 Sir M. B. Chaulbal, B.A., LL.B., K.C.I.E., C.S.I.
- 1926 The Hon'ble Sir C. V. Mehta, M.A., LL.B., K.C.S.I.
- 1932 Sir Sitaram S. Patkar, Kt. B.A., LL.B.
- 1946 Sir H. V. Divatia, Kt. M.A., LL.B.
- 1948 Divan Bahadur K. M. Jhaveri, M.A., LL.B., J.P.

(After the University became a Statutory University—since 1951)

- 1951 His Excellency the Governor of Bombay (in Office at present).

VICE-CHANCELLORS

(Before the University became a Statutory University—up to 1951)

- 1916 Dr. R. P. Paranjpye, M.A., D.Sc.
- 1921 Dr. D. K. Karve, B.A., D.Litt., LL.D.
- 1921 Sir L. A. Shah, Kt., M.A., LL.B.
- 1926 Dr. R. P. Paranjpye, M.A., D.Sc.
- 1926 Mr. Balak Ram, M.A., I.C.S.

- 1929 Dr. Y. G. Nadgir, M.S., F.C.P.S.
 1931 The Hon'ble Mr. Justice S. S. Patkar, B.A., LL.B.
 1932 Dr. D. K. Karve, B.A., D.Litt., LL.D.
 1943 Mrs. Shardagauri Mehta, B.A.
 1944 Divan Bahadur H. L. Kaji, M.A., B.Sc., J.P.
 1947 Mrs. Hansa Mehta, B.A.
 1949 Mr. K. C. Desai, B.A., LL.B.
 (After the University became a Statutory University)
 1950 Lady Premlila V. Thackersey — First Vice-Chancellor of the Statutory University.
 1951 Divan Bahadur K. M. Jhaveri, M.A., LL.B., J.P.
 1957 Dr. Smt. Premlila V. Thackersey, D.Litt. (in Office at present).

DEAN OF THE FACULTY OF ARTS OF THE STATUTORY UNIVERSITY

- 1951 Divan Bahadur H. L. Kaji, M.A., B.Sc., J.P.
 1954 Mr. K. C. Desai, B.A., LL.B. (expired on 22-11-1957).

REGISTRARS

(Before the University became a Statutory University)

- 1916 Prof. D. K. Karve, B.A., D.Litt., LL.D.
 1917 Prof. Dr. H. R. Divekar, M.A., D.Litt.
 1924 Prof. N. M. Athavale, M.A.
 1931 Dr. Mrs. Iravati Karve, M.A., Ph.D.
 1936 Mrs. Sharda Divan, M.A.
 1944 Miss Laxmi Thackersey, B.A.
 (After the University became a Statutory University)
 1950 Mrs. Lilla Wagle-Dhume, B.A. (Cantab), (First Registrar of the Statutory University).
 1951 Miss Laxmi Thackersey, B.A. (in Office at present).

BUDGET OF THE UNIVERSITY 1957-58

Income :

	Rs.
Grant from Vithaldas D. Thackersey Trust	45,000
Government Grant	1,40,000
From other sources such Examination Fees, etc.	2,38,000
	<hr/>
	4,23,000
Income from Schools and Colleges	4,60,189
	<hr/>
Total	8,83,189
	<hr/>

<i>Expenditure</i>	<i>Rs</i>
On University Colleges	4,30,083
On University Schools	1,75,865
Grants to Affiliated Institutions	10,000
Vanita Vishram, Bombay	5,000
Office expenses, Examination charges, Travelling, etc.	2,80,976
Contribution towards Endowments	546
Building Repairs, Gratuity, Depreciation, etc	56,500
University Library & Home Science Department	50,000
University Membership, Students' Camp and Vice-Chancellor's sumptuary allowance	3,000
Furniture for the new Assembly Hall under construction	10,000
	<hr/>
	10,21,970
Non-recurring Capital Expenditure	
S N D T Kanyashala, Poona-extension of Building	30,000
Sanitary arrangements for S N D T College for Women, Poona	10,000
Less Deficit	1,78,791
	<hr/>
Total	8,83,189

UNIVERSITY PROPERTY

General Fund	1,51,362 09
Endowment Fund	1,07,195 58
	<hr/>
Total	2 58,557 67

In addition to the above, the University owns the following .

24 acres of land at Yerandavana	36,000 00
Main Building of S, N D, T College for Women, Poona	1,25,000 00
Hostel Building	75,000 00
Minor Buildings near the Poona College	25 000 00
Piece of land for S N D T Kanyashala, Poona	25,026 50
Swimming Pool at Poona College (At cost)	19,000 00
Vithal Raghoba Lande Buildings	62,000 00
Poona Kanyashala new Extension Building	17,548 22
Plots at Bombay	1,50,000 00
New Plots at Bombay	2,61,788 00
New Building (South wing at Bombay)	9,43,097 34
North wing under construction	14,293 64
	<hr/>
Total	17,53,753 70

SRI VENKATESWARA UNIVERSITY

INTRODUCTORY

Sri Venkateswara University, established by Act XIV of 1954 of the Andhra Legislature, was inaugurated on 2nd September, 1954. To start with it functioned as a teaching University. It assumed affiliating functions also with effect from the academic year 1956-57.

The jurisdiction of the University extends over the districts of Anantapur, Cuddapah, Kurnool, Chittoor and Nellore of the State of Andhra Pradesh. Besides the University College there are 14 affiliated colleges and 4 Oriental Colleges in the University area. Of the affiliated colleges, nine are degree colleges in Arts and Science (two exclusively for Women) two are Teacher Training colleges, one is an Engineering, one is a Medical and one a Veterinary college. One of the Arts and Science colleges is also affiliated for the Bachelor of Commerce Degree.

PRINCIPAL OFFICERS OF THE UNIVERSITY

Chancellor :

Sri Bhimsen Sachar, Governor of Andhra Pradesh.

Pro-Chancellor :

Sri S. B. P. Pattabhi Rama Rao, B.A., B.L.

Vice-Chancellor :

Sri S. Govindarajulu, M.A., LL.B. (Cantab), B.L., Bar-at-Law.

Principal of the University College :

Dr. T. A. Purushotham, M.A., Ph.D. (Lond.).

Registrar :

Sri M. Ramanuja Rao Naidu, M.A.

AUTHORITIES OF THE UNIVERSITY

The principal authorities of the University are: (i) The Senate, (ii) The Syndicate, (iii) The Academic Council, (iv) The Faculties, and (v) The Boards of Studies.

The Senate is the Supreme Governing Body of the University. The Syndicate is the Chief Executive Body. The Academic Council prescribes courses of study, determines the curricula, has general control of teaching within the University and is responsible for the maintenance of the academic standards of the University.

TEACHING STAFF OF THE UNIVERSITY

Principal :

Dr. T. A. Purushotham, M.A., Ph.D. (Lond.).

Mathematics :	Professor	(Vacant).	
	Reader	Dr. M. V. Subba Rao, M.A., M.Sc., Ph.D.	
	Lecturers	Six.	Tutor : One.
Philosophy :	Professor	Dr. T. A. Purushotham, M.A., Ph.D. (Lond.).	
	Reader	Dr. K. C. Varadachari, M.A., Ph.D.	
	Lecturers	Three.	Tutor : (Vacant).
Economics :	Professor	Prof. E. K. Warriar, M.A., M.Sc. (Lond.).	
	Reader	Dr. D. L. Narayana, M.A., Ph.D.	
	Lecturers	Five.	Tutor : One.
Physics :	Professor :	Dr. S. Ramachandra Rao, M.A., D.Sc. (Lond.), F.N.I., F.Inst.P., F.A.Sc.	
	Reader :	Dr. J. Bheemasenachar, M.Sc., D.Sc.	
	Lecturers :	Five.	Demonstrator : Three.
Chemistry :	Professor :	Dr. K. Neelakantam, M.A., Ph.D., D.I.C., F.A.Sc.	
	Reader :	Dr. V. R. Krishnan, M.A., Ph.D. (Kansas).	
	Lecturers :	Four.	Demonstrators : Three.
Zoology :	Professor :	(Vacant).	
	Reader :	Dr. K. Pampapathi Rao, M.A., Ph.D., Dip. in German.	
	Lecturers :	Seven.	Demonstrators : Two.
Botany :	Lecturer :	One.	Demonstrator : One.
English :	Reader :	Dr. M. V. Rama Sarma, M.A., Ph.D. (Wales).	
	Lecturers :	Three.	Tutors : (Vacant).
Telugu :	Reader :	(Vacant).	
	Lecturer :	One.	Tutor : One.
Sanskrit Tamil Hindi	} Part time Lecturer : One in each Department.		

OTHER ADMINISTRATIVE OFFICERS

<i>Asst. Registrar</i>	—	Sri B. Subba Rau, B.A.
<i>Engineer</i>	—	Sri T. Srinivasa Mudali, B.A., B.E.
<i>Asst. Librarian</i>	—	Sri P. Sathyanarayana Patnaik, M.A., Dip. Lib.
<i>University Director of Physical Education</i>	—	Sri L. K. Govindarajulu, B.A., B.L.

COLLEGES WITH NAMES OF PRINCIPALS

<i>Colleges.</i>	<i>Principals.</i>
University College, Tirupati.	Dr. T. A. Purushotham, M.A., Ph.D. (Lond.).

Professional Colleges (5)

Kurnool Medical College, Kurnool.	Dr. C. Venkatramiah, M.B.B.S., M.Sc.
Andhra Veterinary College, Tiru- pati	Dr. P. S. Rajulu, G.M.V.C., B.V.Sc., P.G. (Mukteswar).
College of Engineering, Ananta- pur.	Sri H. Durrani.
Government Training College, Kurnool.	Sri L. Bullayya, M.A., L.T.
Government Training College, Nellore.	(Vacant).

Science and Arts Colleges (9)

Government Arts College, Ananta- pur.	Dr. S. Gopalakrishna Moorthy, D.Sc.
Government Arts College, Cudda- pah.	Sri N. Rama Rao, M.A. (Hons.), B.Ed.
Osmania College, Kurnool.	Sri Mohammad Hussain, M.A.
B. T. College, Madanapalle.	Sri B. Sitaramiah, B.A. (Hons.).
S. V. Arts College, Tirupati.	Sri S. Nagiah, M.A.
S. P. College for Women, Tirupati.	Mrs. K. Rajeswari Moorthy, M.A.
Kavali College, Kavali.	(Vacant).
V. R. College, Nellore.	Sri K. Jaganmohan Rao, B.A. (Hons.).
Govt. K. V. Reddy College for Women, Kurnool.	Miss K. Nathaniel, M.A., L.T.

Oriental Colleges (4)

S. V. Oriental College, Tirupati.	Sri S. Nagiah, M.A.
Veda and Sanskrit College, Nellore.	Sri U. Subbaramiah.
J. M. A. College, Rayadrug.	Syed Ismail Saheb.
Islamia Arabic College, Kurnool.	Syed Zahrullah Husseni Saheb.

NUMBER OF STUDENTS DURING 1957-58

	Strength
University College, Tirupati.	508
<i>Professional Colleges.</i>	
Kurnool Medical College, Kurnool.	67
Andhra Veterinary College, Tirupati.	166
College of Engineering, Anantapur.	387
Govt. Training College, Kurnool.	110
Govt Training College, Nellore.	106
<i>Science and Arts Colleges.</i>	
Govt. Arts College, Anantapur.	1,673
Govt. Arts College, Cuddapah.	1,198
Osmania College, Kurnool.	1,338
B. T. College, Madanapalle.	738
S. V. Arts College, Tirupati.	1,077
S. P. College for Women, Tirupati.	202
Kavali College, Kavali.	423
V. R. College, Nellore.	1,824
<i>Oriental Colleges.</i>	
S. V. Oriental College, Tirupati.	77
Veda and Sanskrit College, Nellore.	33
J. M. A. College, Rayadrug.	53
Islamia Arabic College, Kurnool.	54

NUMBER OF SUCCESSFUL CANDIDATES IN THE UNIVERSITY
EXAMINATION OF MARCH/APRIL 1957.

S. No.	Name of Examination	No of Candidates appeared	No. of Candidates Passed
1.	Matriculation	14	3
2.	Intermediate	3069	734
3.	B.A.	890	311
4.	B.Sc.	159	79
5.	B.A. (Hons.)	27	27
6.	B.Sc. (Hons.)	32	29
7.	B.Com.	26	10
8.	B.Ed.	208	167
9.	B.E. Civil.	51	23
	Mechanical	17	5
	Electrical	19	14
10.	Vidvan	48	46
11.	Siromani	2	2
12.	Vidya Praveena	1	1
13.	Basha Praveena	5	4
14.	Oriental Titles in Urdu	3	2

ENDOWMENTS

<i>Name of Endowment</i>	<i>Name of Donor</i>	<i>Total Value</i>	<i>Income</i>	<i>Purpose</i>
1. 'Vidya Prakash Scholarship'	Messrs. G. R. Damodaram & Brothers, Coimbatore.	Rs. 4,000	Total interest or Rs. 240 which ever is higher.	For the Award of a Scholarship.
2. 'The Chittoor Wholesale Co- operative Marketing Society Ltd., Scholarships'	The Chittoor W. C. M. Society Ltd., Chittoor.	Rs. 15,000	Rs. 600	For the Award of three scholar- ships.
3. 'Patibandla Venkatalakshamma- ma Scholarship'	Smt. Patibandla Venkatalakshamma, Pedapalem, Guntur Dt.	Rs. 5,000		For the Award of a Scholarship.
4. 'Sri S. Govindarajulu Scho- larship'	Prof. V. Venkata Rao, Gauhati Uni- versity, Assam.	Rs. 5,000	Rs. 200	- do -
5. 'Sri P. V. Krishnaiah Chow- dary Prize'	Sri P. V. Krishnaiah Chowdary, Guntur.	Rs. 2,000	Rs. 75	For the Award of a Prize in the shape of books.
6. Smt. Vayuvegula Kameswari Devi Memorial Medal'	Sri V. S. R. Moorthy, Lecturer, Tirupati.	Rs. 3,500	Rs. 120	For the Award of a medal.

DEGREES AND TITLES

The following are the Degrees and Titles instituted in the University.

<i>Faculty of Arts :</i>	B.A., B.A. (Hons.), M.A., M.A. (Hons.), M.Phil.
<i>Faculty of Science :</i>	B.Sc., B.Sc. (Hons.), M.Sc., M.Phil.
<i>Faculty of Commerce :</i>	B.Com.
<i>Faculty of Teaching :</i>	B.Ed.
<i>Faculty of Medicine :</i>	M.B.B.S.
<i>Faculty of Engineering :</i>	B.E.
<i>Faculty of Veterinary Science :</i>	B.V.Sc.
<i>Faculty of Oriental Learning :</i>	Vidya Praveena; Basha Praveena, Vidvan, Siromani, Adib-i-Fazil, Afzal-ul-Ulama, Munshi-i-Fazil.

COURSES OF STUDIES, DEGREES AND EXAMINATIONS

The University had introduced the Pre-University and Three Year Degree courses of study with effect from the academic years 1957-58 and 1958-59 respectively. Consequently the University had abolished the Intermediate courses of study with effect from the academic year 1957-58 and stopped admissions to the three year Honours courses with effect from the academic year 1958-59. Admissions to the two year pass degrees will however be stopped with effect from the academic year 1959-60. The last Intermediate Examination will be held in September, 1959.

I. THREE YEAR PASS DEGREE COURSES OF STUDY

[B.A. (Special), B.A./B.Sc. (General), B.Sc. and B.Com.]

The above courses are of Three years duration after Pre-University Examination. The Scheme of examination for the courses consists of Two Parts; Part I being common to all the degree courses and Part II consisting of Optional subjects:

Part I :

- (a) English (3 Papers)
- (b) Another Language (2 papers)

Any one of the following :

Sanskrit, Arabic, Persian, French, German, Telugu, Tamil,
Kannada, Hindi, Malayalam and Urdu.

- (c) General Education (1 Paper).

PART II :**B.A. Special :**

- (a) One of the following as Main (6 Papers *)

Mathematics, History, Economics, Politics, Social Sciences, Geography, Psychology, Philosophy, Music, Fine Arts and One of the Languages under Part I (a) or (b).

* (Note : There will be 7 Papers in Mathematics.)

- (b) Two of the following as Additional subjects (2 Papers in each subject).

Mathematics, Statistics, History, Politics, Economics, Social Sciences, Geography, Philosophy, Psychology, Music, Fine Arts, Logic, Accounts & Commerce, Elements of Law, Household Arts, Archaeology, Anthropology, English, Sanskrit, Arabic, Persian, Pali, French, German, Telugu, Tamil, Kannada, Malayalam, Hindi and Urdu.

B.A. General :

Any three of the following subjects : (3 Papers in each of the subject.)

Mathematics, History, Politics, Social Sciences, Economics, Geography, Philosophy, Psychology, Music, Fine Arts, Statistics, Physics, Chemistry, Botany, Zoology, Physiology, Accounts, Commerce, Business Administration, Elements of Law, Household Arts, Archaeology, Anthropology, English, Sanskrit, Latin, Arabic, Persian, Pali, French, German, Telugu, Tamil, Kannada, Malayalam, Hindi and Urdu.

Note : Candidates passing the degree examination with any three of the following Science subjects shall be awarded B.Sc. (General).

Mathematics, Physics, Chemistry, Botany, Zoology, Physiology or Statistics.

B.Sc. :

- (a) Any one of the following as Main (* 5 written papers and 2 Practicals).

Mathematics, Physics, Chemistry, Botany, Zoology, Geology, Physiology, Geography and Statistics.

* (Note : In Mathematics there shall be 7 papers. In Botany there shall be 4 written papers and 2 Practicals.)

- (b) Any two of the following as additional (2 papers in each subject.)

Mathematics, Statistics, Physics, Chemistry, Zoology, Botany, Geology, Physiology, Geography and Economics.

B.Com. :

There shall be two Groups ; Group A and Group B. Group A consists of 5 subjects and Group B consists 4 subjects, including the one Special subject to be chosen by the candidate.

There shall be 8 papers on the 8 compulsory subjects (i.e., 5 under Group A and 3 under Group B) and two papers on the Special subject chosen by the candidate.

Passing Minimum required :**PART I : (Common to all degree courses)**

35 per cent of the marks in each division, viz., A, B and C and 40 per cent in the aggregate.

PART II : Optional subjects :**B.A. Special :**

35 per cent in each of the following divisions and 40 per cent in the aggregate.

- (a) All the papers in Main.
- (b) All the papers in one additional subject.
- (c) All the papers in the other additional subjects.

B.A. General :

35 per cent in each of the subjects and 40 per cent in the aggregate.

B.Sc. :

35 per cent in each * division and 40 per cent in the aggregate.

* Each subject will be a division. In cases where there are practicals the written papers and practicals will each be separate divisions.

B.Com. :

30 per cent in each subject and 40 per cent in the aggregate.

Note : A candidate will however be declared to have passed in Group A or Group B if he obtains not less than 30 per cent in each of the subject and 40 per cent in the aggregate of that group. Such a candidate shall not be classed.

II. POST-GRADUATE AND RESEARCH DEGREES.**(i) M.A. Degree Examination :**

A candidate who has qualified for the B.A. (Hons.) Degree or B.Sc. (Hons.) Degree of this University by passing the prescribed examination under the Regulations may, without further examination but upon pay-

ment of the prescribed fee, proceed to take the M.A. Degree of the University at any convocation subsequent to his taking the B.A. (Hons.) or the B.Sc. (Hons.) Degree.

As a transitory measure the following Post-Graduate courses, for the benefit of the Honours Graduates and pending adoption of Regulations and Syllabi for the two year M.A. and M.Sc. courses, have been instituted.

(ii) *M.A. (Hons.) Degree Examination :*

The Degree of Master of Arts (Honours) is conferred on persons who have passed the B.A. (Hons.) Degree examination of this University or an examination recognised by the University as equivalent thereto and who have undergone subsequently further course of study in the University College extending over a period of one year.

The course is offered in the following subjects :

1. Philosophy, 2. Economics, 3. Telugu, 4. Sanskrit, 5. English.

There shall be four papers and a *Viva Voce* in each of the subjects carrying 100 marks each.

Candidates shall be declared to have passed the examination, if they obtain not less than 40 per cent of the marks in each paper and 50 per cent in aggregate.

(iii) *M.Sc. Degree Examination :*

The Degree of Master of Science is conferred on persons who have passed the B.Sc. (Hons.) or the B.A. (Hons.) Degree examination of this University or an examination recognised by the University as equivalent thereto and who have undergone subsequently further course of study in the University College extending over a period of one year.

The course is offered in the following subjects :

1. Mathematics. 2. Physics. 3. Chemistry. 4. Zoology.

There shall be two written papers and two practicals in each of the above subjects, except Mathematics and a *Viva Voce*.

In Mathematics there shall be four written papers each carrying 100 marks.

Candidates shall be declared to have passed the examination, if they obtain not less than 40 per cent of the marks in the written papers and the practicals separately and 50 per cent in the aggregate.

In Mathematics, candidates will be declared to have passed the Examination if they obtain not less than 50 per cent of the total marks.

NOTE : In both M.A. (Hons.) and M.Sc. Examinations there shall be two classes : First class—60% and above in the aggregate. Second class—remaining successful candidates.

(iv) *M.Phil. Degree (By Research) :*

The Degree of Master of Philosophy is conferred on persons who have passed the B.A. (Hons.) or the B.Sc. (Hons.) Degree Examination of this University or an examination recognised by the University as equivalent thereto and who have pursued in the University for at least two academic years of approved fulltime course of research under the guidance of University Teacher and passed the examination prescribed therefor.

III. PROFESSIONAL COURSES OF STUDY

(i) *B.Ed. :*

(a) Duration: One year.

(b) Courses and papers :

Part I (Written Examination)

<i>Days</i>	<i>Hours</i>	<i>Subject</i>	<i>Hours</i>
First Day	8 to 11	Theory and Practice of Education—I	100
Second day	8 to 11	Theory and Practice of Education—II	100
Third day	8 to 11	The principles and practice of Basic Education (including Pre-Basic.)	100
Total for Part I.			300

Part II (Written Examination)

Fourth day	8 to 11	Methods of teaching General	100
Fifth day	8 to 11	Methods of teaching	50
	(1½ hours for each sub.)	Special A	(for each sub.)
Sixth day	8 to 10	Methods of Teaching Special B	50

There shall be one paper for each of the subjects under 'Special B'.

Total number of marks for Part II, 200 marks or 250 marks according as the number of special subjects chosen is 2 or 3.

Part III (Practical Test)

	At College marks.	At Examination.
Teaching practice each special subject,	40	60
Practical working and maintenance of Audio-visual aids; preparation and maintenance of other apparatus.	40	
Measurement and Diagnosis (Examining, testing, recording, evaluating.)	40	
Practical aspects of Health Education and Citizenship Training	40	
Physical Education.	40	
Arts and Crafts or Home Science for women (including Basic crafts).	40*	

*Only when the number of special subjects chosen is two.

(c) Marks qualifying for a pass in:

- (1) not less than 35 per cent of the aggregate marks in papers 1, 2 and 3 comprising Part I;
- (2) not less than 35 per cent of the marks in 'Methods of teaching—General' and not less than 35 per cent of the marks (in the aggregate, if necessary) in the papers on 'Methods of Teaching Special', and not less than 40 per cent of the marks in the aggregate in the papers on 'Methods of Teaching—General and Methods of Teaching—Special'.
- (3) not less than 40 per cent of the marks in 'Teaching practice' for the work done at College and for the lessons given at the Practical Examination in the two special subjects taken together and not less than 40 per cent of the aggregate marks in Part III.

First Class: 60% and above; Second Class: 50% and above; Third Class: the rest.

(ii) M.B.B.S.:

- (a) Duration: Five years plus six months of post-examination training.
- (b) Courses and Papers:

(1) First M.B.B.S. Examination :

Part I: Organic Chemistry.

Part II: (i) Anatomy.

(ii) Physiology.

(2) Second M.B.B.S. Examination :

(i) Pharmacology.

(ii) Pathology.

(iii) Hygiene.

(3) Final M.B.B.S. Examination :

(i) Medicine.

(ii) Surgery.

(iii) Obstetrics and Gynaecology.

(iv) Ophthalmology.

(v) Forensic Medicine.

(4) Post Examination Training for six months after passing the Final Examination and before conferment of the Degree.

(iii) B.E. :

(a) Duration : 4 Years. (F.E.—2 Years and B.E.—2 Years)

(b) Courses and Scheme : First Examination : It consists of two parts, Part I and Part II ; taken at the end of the first and second years, respectively.

Subjects under Part I :

Mathematics I

Mathematics II

Physics

Chemistry

Applied Mechanics I

Civil Engineering I

Mechanical Engineering I

Practical Geometry

Building Drawing

Machine Drawing

Surveying

Workshop

Subjects under Part II :

Mathematics III

Applied Mechanics II

Civil Engineering II

Mechanical Engineering II

Electrical Engineering II

Surveying

Civil Engineering Drawing

Machine Drawing

Estimating

Workshop

Bachelor of Engineering Examination :

Condition of admission :—Candidates for the B.E. Examination shall have passed the F.E. Examination and undergone a regular course of studies thereafter for not less than two academic years in an affiliated college of Engineering.

Scheme of Examination :

The examination shall be held in the following Branches: Civil, Mechanical and Electrical, consisting of two parts.

Candidates for each of the Parts I and II shall undergo the course of studies prescribed for the respective parts for a period of not less than one academic year.

*Civil Engineering :**Part I*

Mathematics.
Strength of Materials and
Theory of Structures.
Hydraulics I.
Geology.
Civil Engineering I.
Civil Engineering II.
Surveying I.
Design and Drawing I.
Estimating, quantity surveying
and specifications.

Part II

Theory of Structures II.
Hydraulics and Hydraulic
Machinery II.
Surveying II.
Irrigation.
Sanitary Engineering.
Design and Drawing II
(Structural).
Design and Drawing III.
(Irrigation and Sanitary
Engineering).
Project including Drawing,
Estimating and *Viva Voce*.

*Mechanical Engineering :**Part I.*

Mathematics.
Strength of Materials and
Theory of Structures I.
Hydraulics I.
Heat Engines I.
Theory of Machines I.
Fuels, Gas Plants and Boilers.
Electrical Technology I.
Machine Drawing and Design I.
Workshop I.

Part II.

Hydraulic Machinery.
Heat Engines II.
Automobile Engineering.
Electrical Technology II.
Workshop Practice and
Machine Tools.
Theory of Machines II.
Engineering Economics .
Design and Drawing II.
Workshops II.

*Electrical Engineering :**Part I.*

Mathematics
Strength of Materials and
Theory of Structures I.
Hydraulics I.
Mechanical Technology I.
Engineering Electronics.
Electrical Machinery I.
Elec. Design and Drawing I.
Workshops I.
Industrial Economics and
Administration.

Part II.

Mechanical Technology II.
Hydraulic Machinery.
Electrical Machinery II.
Electrical Power I.
Electrical Power II.
Water Power Engineering.
Electrical Measurements.
Electrical Design and Drawing II.
Workshops II.

(c) *Percentage of marks for a pass*:—A candidate shall be declared to have passed the examination if he obtains 40 per cent of the marks in each of the written papers and 50 per cent marks in (a) practical and sessional work in each subject and (b) in the aggregate.

(d) *Classification of successful candidates*:—Candidates who have passed Parts I and II of the examination on the first occasion of their appearing therefore, shall be ranked in the order of proficiency as determined by the total marks obtained by each in both parts, and shall be arranged in two classes, the First class consisting of those who have obtained not less than 60 per cent of the marks in the aggregate and the Second class consisting of all others.

Candidates who pass in the First class and who obtain not less than 66 per cent of marks in the aggregate shall be deemed to have passed with Honours.

Candidates who pass the whole examination at a subsequent appearance or subject by subject shall be separately ranked in the Second class.

(iv) *B.V.Sc. Degree*:

(a) *Duration*: 4 years.

(b) *Courses and scheme of examination*: The examination for the degree shall consist of a Preliminary, Second Year, Third Year and a Final examination.

(i) *Courses*:

Preliminary:

1. Anatomy including Osteology and Anthrology, Histology and Embryology.
2. Physiology including Biochemistry.
3. Animal Husbandry, Agronomy including Soils and Crop, Animal Management and Shoeing.

Second Year:

1. Anatomy.
2. Physiology including Experimental Physiology.
3. Animal Husbandry.
4. Pathology and Bacteriology including Immunology.

Third Year:

1. Parasitology including Elminthology, Protosology and Entomology.
2. Clinical Medicine including Therapeutics and Toxicology.

3. Pharmacology including Materia Medica.
4. Animal Husbandry including Nutrition and Dairy Science.

Final Year :

1. Surgery including Soundness, Obstetrics and Veterinary Jurisprudence.
2. Preventive Medicine.
3. Mcat Inspection.
4. Animal Husbandry—Genetics and Animal Breeding.

(ii) *Scheme of examination :*

The examination consists of a paper of three hours' duration, a practical examination of three hours' duration and an oral examination on each of the subjects mentioned under each examination.

Passing minimum required : Candidates shall be declared to have passed each of the examinations, if they obtain in each subject not less than one half of the number of marks in the written and oral parts taken together and not less than one half of the marks in the practical examination. All other candidates shall be deemed to have failed in the examination.

Candidates who fail in the examination but obtain the prescribed minimum marks for a pass in any subject shall be exempted from the examination in that subject. Candidates who fail more than once in the examination shall revert to the next lower year of study concerned and undergo a further course of study for one term in the subject or subjects in which they are permitted to re-appear for the examination.

Candidates who pass the whole examination at the first appearance shall be arranged in two classes—the First consisting of those who obtain not less than 70 per cent of the aggregate and the Second consisting of all others.

UTKAL UNIVERSITY

INTRODUCTORY : CHARACTER OF THE UNIVERSITY

With the creation of Orissa as a separate Province in 1936, the popular desire for a University for the Province was widely expressed and Committees were appointed by the Local Government to report on the establishment of a University. The first (official) Committee was appointed on the 14th April, 1937 and the Second Committee on the 2nd March, 1938. The Utkal University Act was passed by the Orissa Legislature on the 30th June, 1943 and the University was inaugurated on the 2nd of August, 1943. At present it is functioning as an affiliating-cum-teaching University.

CONSTITUTION OF THE UNIVERSITY

The authorities of the University are :—

The Senate, the Syndicate, the Academic Council and the Matriculation Board.

Other Statutory bodies of the University are the Boards of Studies and the Faculties.

The Senate is the Supreme Governing Body of the University with powers of legislation. The Syndicate is the Executive Body and the Academic Council prescribes all courses of studies and curricula and advises the Senate and the Syndicate on all academic matters. The Boards of Studies consider the report on any matter which is referred to them by the Syndicate or the Academic Council and in particular recommend to the Syndicate on text books, syllabi for the University Courses of Studies and also assist the Syndicate in recommending persons fit to be question paper-setters and examiners for the University examinations. The Faculties consist of different departments of teaching with persons expert in their subjects and they report on any matter that is referred to them by the Senate or the Syndicate or the Academic Council.

OFFICERS OF THE UNIVERSITY

Chancellor :

Shri Yeshwant Narayan Sukthankar, M.A., LL.B. (Cantab),
Bar-at-Law, I.C.S. (Retd.), Governor of Orissa.

Pro-Chancellor :

Dr. Pandit Nilakantha Das, M.A., D.Litt.,
Hon'ble Speaker, Orissa Legislative Assembly.

Vice-Chancellor :

Padmabhusan Dr. P. Parija, O.B.E., D.Sc., M.A. (Cantab),
I.E.S. (Retd.), F.N.I.

Registrar :

Shri G. C. Rath, M.A., Dip-in-L.Sc.

Assistant Registrar :

Shri D. P. Barai, M.A., Dip-in-Edn.

Addl. Asst. Registrar :

Shri P. C. Das, B.A., Dip-in-Edn. (Bristol) F.R.H.S. (London).

DEANS OF FACULTIES

Faculty of Arts	..	Shri M. C. Pradhan, M.A., B.L., Dip-in-Edn. (Pat. & Edin.).
Faculty of Science	..	Dr. B. Samantarai, M.Sc., B.L., Ph.D. (London), D. I. Sc. (England).
Faculty of Law		Shri H. Mahapatra, M.A., B.L.
Faculty of Education	..	Shri Baidyanath Rath, M.A. (London).
Faculty of Medicine	..	Rai Bahadur Dr. K. N. Misra, B.Sc., M.B., D.T.M.
Faculty of Commerce	..	Prof. B. C. Das, B.A. (London).
Faculty of Veterinary Sc. & Animal Husbandry	..	Dr. G. Biswal, D.V.M. (Hons.), (Mich.), M.S. (Mich.), Ph.D. (Ill.).
Faculty of Agriculture	..	Shri D. Misra, B.Ag. (Nagpur), Dip-in-Agri. Sc. (Cantab).

AFFILIATED COLLEGES

There are at present 21 colleges affiliated to this University and two colleges namely, the Madhusudan Law College of the Utkal University and University College of Engineering, Burla, P.O. Hirakud Colony, Dist. Sambalpur are under the direct control and management of the University.

(A) Colleges teaching upto post-graduate standard in Arts and Science and Education.

Name of College

Principal

Ravenshaw College, Cuttack—Arts and Science.	Dr. S. Misra, M.A., Ph.D. (Lond.)
Radhanath Training College, Cuttack—Education.	Shri B. N. Rath, M.A. (London).

(B) Colleges teaching upto the Degree standard in Arts, Science, Commerce and Education.

<i>Name of College</i>	<i>Principal</i>
Gangadhar Meher College, Sambalpur—Arts, Science and Commerce degree stage	Shri P. Pradhan, M.A.
Fakir Mohan College, — Arts—Degree stage. Science — Intermediate stage.	Shri M. A. John, M.A.
Samanta Chandra Sekhar College, Puri — Arts — Degree stage. Science—Intermediate stage.	Dr. D. Misra, M.A., A.M. (Columbia), Ph.D. (Utkal).
S.K.C.G. College, Parlakimedi—Arts — Degree stage. Science—Intermediate stage.	Dr. Ganeswar Misra, M.A., Ph.D. (London)
Shailabala Women's College, Cuttack—Arts—Degree stage.	Mrs. I. L. Sinha, M.A. (London).
Rajendra College, Bolangir—Arts—Degree stage. Commerce—Intermediate stage.	Shri D. N. Dutta, M.A., B.L.
Christ College, Cuttack—Arts—Degree stage.	Mr. B. Mohanty, M.A., B.L.
Khallikote College, Berhampur—Arts, Science and Commerce upto Degree stage.	Shri Narasingo Padhi, M.A., L.T.
Maharaja Purna Chandra College, Baripada—Arts — Degree stage. Science—Intermediate stage.	Shri J. Mohanty, M.A.
Bhadrak College, Bhadrak—Arts—Degree stage. Science — Intermediate stage.	Shri B. B. Rakshit, M.A., A.E.S.

(C) Colleges teaching upto Intermediate standard in Arts and/or Science.

Stewart Science College, Cuttack—Science.	Mr. E. C. Baxter, B.Sc. (Hons.), (London), C.Ed. (Birm.).
Narasing Chaudhury College, Jajpur—Arts.	Shri N. C. Goswami, M.A.
Vikram Dev College, Jeypore—Arts and Science.	Shri A. C. Bir, M.Sc.
Intermediate College in Science, Bhubaneswar—Science.	Shri B. Dasgupta, M.A., B.L.
Intermediate College in Science, Keonjhar.	Shri J. N. Pradhan, M.Sc.

(D) Professional and Training Colleges.

<i>Name of College</i>	<i>Principal</i>
Government Training College, Angul—Degree in Education. (B.Ed.)	Shri S. Nath, M.A. (London).
Utkal Kurshi Mahabidyalaya, Bhubaneswar—Degree in Agriculture.	Shri D. Misra, B.Ag. (Nagpur), Dip-in-Agri. Sc. (Cantab).
Sriram Chandra Bhanj Medical College, Cuttack—M.B., B.S.	Dr. G. C. Pattanayak, M.B.B.S., D.T.M., D.G.O. (London), D.R. C.O.G. (London), L.M. (Dublin), D.P.H.
Madhusudan Law College, Cuttack, of the Utkal University—LL.B.	Mr. K. Satyanarayana Murty, B.A., M.L., Professor of Law.
Orissa College of Veterinary Science and Animal Husbandry—Veterinary Science and Animal Husbandry (B.V.Sc. & A.H.)	Dr. G. Biswal, B.V.Sc., Ph.D.
University College of Engineering, Burla, P.O. Hirakud Colony, Sambalpur—B.Sc. (Engineering)	Shri B. Prasad, M.Sc., B.L., B.Sc. (Engg.), (Manchester).

(E) Besides the above the University has introduced—

(i) a Diploma Course in Modern European Languages (French and German) with effect from the session 1949-50. The Diploma course extends over a period of two years and the minimum qualification for admission is a pass in the Intermediate examination of this University or of other Universities recognised by this University as equivalent thereto. A Diploma is granted to successful candidates. Provision has also been made by the University for imparting instructions in a certificate Course in French and German Languages with effect from the commencement of the session 1953-54. Duration of the course is one year and the minimum qualification for admission is the same as provided for the Diploma Course. The candidates passing the examination are awarded a certificate ;

(ii) a Diploma Course in Statistics in 1956-57 to give part-time training to graduates in Statistical methods and computations. A diploma is granted to successful candidates ;

(iii) the Department of Rural Economics and Sociology from 1956-57 to impart training in the Research Methodology and on subjects of Economic developments particularly on Indian Rural Problems. The Research scholars are trained for preparing themselves for Ph.D. degree of the University ; and

(iv) Post-graduate Departments in Sanskrit and Philosophy from 1957-58.

STRENGTH IN COLLEGES IN 1956-57

	Men	Women	Total
(a) In all colleges (except Professional and Training Colleges)	5,349	587	5,936
(b) In Professional and Training Colleges :			
(i) S. C. B. Medical College, Cuttack.	242	69	311
(ii) Radhanath Training College, Cuttack.	63	16	79
(iii) Govt. Training College, Angul.	48	—	48
(iv) Madhusudan Law College of the Utkal University, Cuttack.	202	1	203
(v) Orissa College of Veterinary Science & Animal Husbandry.	61	—	61
(vi) Utkal Krushi Mahavidyalaya, Bhubaneswar.	80	—	80
(vii) University College of Engineering, Burla.	70	—	70
Grand Total of students in all Colleges.	6,115	673	6,788

CONTROL OF THE UNIVERSITY OVER THE AFFILIATED COLLEGES

The University exercises control over the appointment of teachers, their conditions of service, suitability and adequacy of accommodation and equipment for teaching, the character, qualification and adequacy of teaching staff and the residence, physical welfare, discipline and supervision of students in the Affiliated Colleges.

ADMISSION TO THE UNIVERSITY

Admission to the University courses of studies (Intermediate) are open to the students who have passed the examinations named below :—

1. Matriculation Examinations conducted by all the Statutory Universities in India.
2. High School Certificate Examination conducted by the Board of Secondary Education, Madhya Pradesh, Nagpur.
3. High School Examination of the Central Board of Secondary Education, Ajmer.
4. S. S. L. C. Examination of the Board of Secondary Education, Mysore.
5. Secondary School Certificate Examination of the Board of Secondary Education, Bombay, Poona.
6. High School Examination of the Board of High School and Intermediate Education, U.P., Allahabad.

7. English School Leaving Certificate Examination (the Pass Certificate of which is counter-signed by the Director of Public Instruction) of the E. S. L. C. Board of the Government of Travancore-Cochin.
8. School Final Examination of the Board of Secondary Education, West Bengal, Calcutta.
9. Cambridge School Certificate Examination (Senior Cambridge).
10. Senior School Certificate Examination of the Government of Ceylon.
11. Indian Army Special Certificate Examination.
12. Indian Air Force Matriculation Test.
13. Higher Educational Test of the Royal Indian Navy.
14. Vidya Vinodini Examination with Advanced English and Mathematics of the Prayaga Mahila Vidya Pitha, Allahabad.
15. High School Examination conducted by the Board of Secondary and Intermediate Education, Madhya Bharat, Gwalior.
16. Matriculation Examination of the East Bengal Secondary Education, Dacca.
17. Secondary School Examination of the Bihar School Examination Board, Patna.
18. High School Certificate Examination of the Board of Secondary Education, Orissa.
19. British Civil Services Commission Forces Preliminary Examination.

DEGREES AWARDED BY THE UNIVERSITY

<i>Faculty of Arts</i>	—	B.A., B.O.L., M.A., Ph.D., D.Litt.
<i>Faculty of Science</i>	—	B.Sc., M.Sc., Ph.D., D.Sc.
<i>Faculty of Law</i>	—	LL.B., LL.M.
<i>Faculty of Education</i>	—	B Ed., M.Ed.
<i>Faculty of Commerce</i>	—	B.Com.
<i>Faculty of Medicine</i>	—	M.B.B.S.
<i>Faculty of Agriculture</i>	—	B.Ag.
<i>Faculty of Veterinary</i>		
<i>Sci. & Animal Husbandry</i>		B.V Sc. & A.H.
<i>Faculty of Engineering</i>	—	B.Sc. (Engineering).

POST-GRADUATE STUDY

For the present Post-graduate study has been provided for the following subjects of Arts and Science :—

Master of Arts	—	English, Oriya, Sanskrit, Economics, Philosophy, History and Mathematics.
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Master of Science — **Physics, Chemistry, Mathematics, Botany and Geology.**

BACHELOR OF ARTS AND SCIENCE

Courses of Studies for the Bachelor's degrees in Arts and Science (both Pass and Hons.) extend over a period of two academic years and any registered student of the University may be admitted to the examination for the Bachelor degree in Arts or Science if he has completed in one or more colleges admitted for the purpose of such examination in the subject which the candidate offers. A regular course of study for not less than two academic years after passing the Intermediate Examination or some other examination recognised by this University as equivalent thereto.

BACHELOR OF COMMERCE

Courses of Studies for the Bachelor's degree examination in Commerce extend over a period of two academic years. A candidate shall only be eligible for admission to the examination in Commerce if he has passed the Intermediate examination in Commerce or Intermediate examination in Arts or Science.

MASTER OF ARTS

Courses of Studies for the Master's degree in Arts extend over a period of two years and are open to any registered student of this University who has passed B.A. or B.Sc. or B.Com. examination or some other examination recognised by the University as equivalent thereto, not less than two academic years previously, if he has completed a regular course of study in the subject offered in a college or colleges admitted to the privileges of the University.

MASTER OF SCIENCE

Courses of Studies for the Master's degree in Science extend over a period of two years and are open to any registered student of this University who has passed the B.Sc. examination or some other examination recognised by the University as equivalent thereto not less than two academic years previously and if he has completed a regular course of study in the subject offered in the college or colleges admitted to the privileges of the University.

Ph.D. IN ARTS OR SCIENCE

Any person who holds the degree of Master of Arts or Science from this University or from any other recognised University is permitted to appear for the Ph.D. degree in Arts or Science of this University respectively, if not less than two years have elapsed since he passed the examination and no candidate if he was not placed either in the first or the second class at the examination for the Master's degree or the

degree recognised as equivalent thereto is allowed to appear at the Ph.D. examination without special permission of the Syndicate.

D.Litt. AND D.Sc.

For the Doctor's degree in Literature or Science any person holding the Master's degree in Arts or Science of the Utkal University or of any other recognised University who was placed in either the first or the second class at the examination for the degree of Master, or any person who holds the degree of Ph.D. in Arts or Science of the Utkal University or of any other recognised University, may at any time not less than five years in the case of the former and three years in the case of the latter from the date when he passed the examination for such degree, offer himself as a candidate for the degree of Doctor of Literature or Science respectively.

B.Ed.

The Bachelor of Education examination of this University is designed to test the fitness of the candidates for work in Secondary Schools or in Primary Schools. Any registered candidate may be admitted to the Bachelor of Education examination not less than one year after passing the B.A. or B.Sc. examination or an examination recognised as equivalent thereto, if he has completed a regular course of study in a Training college or colleges admitted for this purpose and has undergone a course of practical training in one or more schools approved by the Syndicate for the purpose.

MASTER OF LAWS

The Master of Law examination is open to any registered candidate of the University who has passed the Bachelor of Law examination, or some other examination recognised by the University as equivalent thereto.

BACHELOR OF LAWS

The Bachelor of Law examination is open to any registered candidate of the University if he after passing the B.A., B.Sc., B.Com., M.B.B.S., B.O.L. examination of this University or a Bachelor's degree in Engineering and any other examination recognised as equivalent thereto, completes a regular course of study for not less than two academic years in a college admitted in Law and he must pass the two examinations in Law, namely, Law Part I not earlier than the end of the first year of Law study and the Law examination Part II not earlier than the end of the second year of Law study.

BACHELOR OF MEDICINE AND SURGERY

A candidate for the M.B.B.S. degree of the Utkal University shall be required to pass the following examinations of which the last two represent the medical course proper, namely :—

- (i) The First M.B.B.S. examination, and ..
- (ii) The Final M.B.B.S. examination Parts I and II.

No candidate shall be allowed to begin the Medical course proper until he has completed the age of 17 unless he will complete that age during the first four months of the medical course.

A registered student of the University may be admitted to the First M.B.B.S. examination if he has subsequently to his passing one of the following examinations, completed a regular course of study, theoretical and practical in the subjects of examination for not less than two academic years in a college admitted to the University up to the standard of the First M.B.B.S. examination.

(i) The I.Sc. examination of the Utkal University with Physics, Chemistry and Biology, or some other examination recognised by the Academic Council as equivalent thereto holds good for the purpose of this regulation.

(ii) The B.Sc. examination of a recognised University with Botany and Zoology, in addition to having passed in Physics and Chemistry either at the Intermediate or degree examination is also an additional qualification for admission to this examination.

M.Ed.

The Master of Education examination of this University is designed to test the fitness of the candidates for work in colleges or Secondary schools. Any registered candidate may be admitted to the Master of Education examination not less than one year after passing the B.Ed. examination if he has completed a regular course of study under one or more Professors, Readers or Lecturers in Education in a college admitted for the purpose.

BACHELOR OF AGRICULTURE

The Bachelor of Agriculture examination of this University is open to any registered candidate of this University provided he has passed the I.Ag. examination of this University or some other examination recognised by the Academic Council as equivalent thereto and provided he completes a regular course of study for two years in a college of Agriculture affiliated to this University for the purpose. The B.Ag. examination has been grouped into two University examinations, i.e., 1st B.Ag. examination after one year of the course and Final B.Ag. examination at the end of the course.

B.V.Sc. & A.H.

The B.V.Sc. & A.H. examination of this University is open to any registered candidate of this University provided he prosecutes a regular course of study for four years after passing the I.Sc. examination of

this University or any other examination recognised by the Academic Council as equivalent thereto in a college or colleges affiliated to this University for the purpose. The four years of the course has been grouped into four University examinations, i.e., the 1st, 2nd and 3rd B.V.Sc. & A.H. examination at the end of each of the three years and the Final B.V.Sc. & A.H. examination at the end of the final year.

B.Sc. (Engg.)

A candidate for the B.Sc. (Engg.) degree of the Utkal University shall be required to pass the following examinations :—

- (i) I.Sc. (Engg.) Examination—Part I.
- (ii) I.Sc. (Engg.) Examination—Part II.
- (iii) B.Sc. (Engg.) Examination—Part I.
- (iv) B.Sc. (Engg.) Examination—Part II.

No candidate shall be allowed to begin the Engineering course proper until he has completed or shall complete the age of 17 by the 1st November of the year in question.

A registered student of the University may be admitted to the I.Sc. (Engg.) Part I examination provided he has passed the I.Sc. examination with Physics, Chemistry and Mathematics or an examination recognised by the Academic Council as equivalent thereto and has subsequently completed a regular course of study for not less than one academic year in a college admitted to the University for the purpose.

ADMISSION OF NON-COLLEGIATE STUDENTS

A non-collegiate student shall not be admitted to any University examination other than the Matriculation examination but the Syndicate ordinarily grants permission to appear at any such examination to the following non-collegiate students namely :—

A person who has, during the three academic years immediately preceding such examination (i) served as an Inspecting Officer in the Education Department, or (ii) served as teacher in a college or any other educational institution approved for this purpose by the Syndicate. These privileges are also extended to Laboratory assistants, Demonstrators and Librarians serving in an institution under the jurisdiction of the University.

The University also prescribed regulations for the following type of candidates for appearing at the examination privately :—

- (i) candidates whose studies have been interrupted by their joining one of the defence services ;
- (ii) candidates from the disturbed areas of Pakistan and Indian dominions ;
- (iii) refugee students, etc.

WOMEN'S EDUCATION

Women candidates are admitted to all examinations (except Professional examinations) of the University without attending a regular course of study in any institution under the jurisdiction of the University.

MILITARY TRAINING

At the instance of the Government of India, Home Department, the I.A.T.C. and U.O.T.C. which were functioning under the University were disbanded and in their place the National Cadet Corps has been organised by the Army Headquarters, New Delhi, with its Headquarters at Cuttack.

INTER-COLLEGE DEBATE

An Inter-College Debate is arranged every year in which two boys from each of the colleges in Orissa take part. The Chancellor's Prize of the value of Rs. 100 is awarded to the best speaker.

The Vice-Chancellor's Prize of the value of Rs. 60 is awarded to the second best speaker and the Advocate-General's Prize of the value of Rs. 50 is awarded to the third best speaker. The University is also awarding a running cup to the College whose student stands first in the Debate.

INTER-COLLEGE TOURNAMENT

Inter-College tournaments are arranged every year in which all colleges under the jurisdiction of the University take part. Cups and medals are also awarded to the winners. This University is also taking part in the Inter-University tournaments.

STUDENTS' INFORMATION BUREAU

In order to supply information to students desiring to proceed abroad for advanced studies and for studies in other Universities in India, a Students' Information Bureau has been established under the University which is continuing to function.

FELLOWSHIPS

Maharaj Kumari Sudhansumukhi Gajapati Fellowship: In order to promote Paddy Research, the award of the Fellowship is made by the Syndicate in accordance with rules laid down by that Body. The value of the Fellowship is Rs. 100 p.m.

MEDALS

The following Gold Medals are awarded by the University at the Annual Convocation each year for the purpose for which they have been instituted :—

(1) *Mayurbhanj Gold Medal* is awarded to a student who secures highest number of marks in the aggregate among the successful Honours Degree candidates in the annual examination.

(2) *Bhakta Kabi Madhusudan Rao Gold Medal* is awarded to a student who secures the highest percentage of marks among the candidates at the M.A. (Oriya) and Oriya Honours Degree examinations.

(3) *Khan Bahadur Rustomji P. Patel Memorial Gold Medal* is awarded to a student who secures the highest marks in the M.A. examination in Economics and Political Science.

(4) *Samatan Pujari Memorial Gold Medal* is awarded to a student who stands First in Anatomy at the First M.B.B.S. examination having secured 66 per cent of the full mark for that subject in the minimum and passes in all subsequent examinations for the M.B.B.S. Degree in regular and first chances.

(5) *Jogendranath Bose Gold Medal* is awarded to a student who passes the Final M.B.B.S. examination in the first chance and secures highest marks in the aggregate at the Final M.B.B.S. Part II examination.

(6) *Rani Suratarangini Devi of Tekkali Memorial Gold Medal* is awarded to a student who passes the LL.B. Part I and Part II examinations in regular and single chances having secured the highest marks in the aggregate at the Final (LL.B. Part II) Law examination.

(7) *University Gold Medal in Mathematics* is awarded to a student* who secures the first position in First Class among the candidates of M.A. and M.Sc. examinations in Mathematics.

(8) *University Gold Medal in History* is awarded to a student who secures the first position in First Class among the candidates of M.A. in History.

(9) *University Gold Medal in Chemistry* is awarded to a student who secures the first position in First Class among the candidates of M.Sc. in Chemistry.

(10) *University Gold Medal in Botany* is awarded to a student who secures the first position in First Class among the candidates of M.Sc. in Botany.

(11) *Flying Officer Satyendra Narayan Acharya Memorial Gold Medal* will be awarded to a candidate who secures the highest mark at the final Post-Graduate examination in Aeronautics and Aerophysics. Since there is no teaching provision yet on the above subject, the medal will be awarded for the time being every year to a successful candidate who secures the highest marks subject to a minimum of 66 per cent marks in Ophthalmology and he passes the examination in the first chance.

(12) *Rohini Gadadhar Memorial Gold Medal* is to be awarded to a candidate who secures the highest percentage of marks in the M.A. Degree examinations in Sanskrit having obtained at least a II Class or to the candidate who secures the highest percentage of marks in the B.A. (Hons.) examination in Sanskrit and passes the examination in the first attempt.

SCHOLARSHIPS

The following scholarships are awarded :—

(1) *The Lewis Scholarship* of the value of Rs. 350 a year tenable for two years in the Ravenshaw College is awarded to an Oriya Graduate of the University for Post-Graduate study in any Science subject on rotation.

(2) *The Jagannath Scholarship*. Two Scholarships of the value of Rs. 10 each per month is awarded for a period of two years in the Ravenshaw College to an I.A. or I.Sc. passed Oriya student securing the highest marks in the aggregate and reading B.A. or B.Sc. but not holding any other scholarship.

(3) *Utkal Co-operative Cloth and Yarn Syndicate Scholarship*. Two Scholarships of the value of Rs. 25 each per month tenable for a period of two years in the Ravenshaw College are awarded, one to a student who is a permanent resident in Orissa and secures the highest mark at the B.A. examination and another to a student who is a permanent resident in Orissa and secures the highest mark at the B.Sc. examination and both read in the 5th year class having passed their respective degree examination at the first chance in the preceding annual examination subject to their not holding any other scholarship.

(4) *Philip Memorial Scholarship* of the value of Rs. 8 per month tenable for a period of two years in a college affiliated to the Utkal University is awarded to a regular student who having passed the annual I.Sc. examination takes admission in the 3rd year B.Sc. class and would have obtained a position next to the candidate or candidates eligible for Government Scholarship or any other Scholarship in the I.Sc. examination.

(5) The University has made provision for the award of 5 research scholarships to the first class M.A. or M.Sc. students. Such scholarships are awarded since 1954-55.

PRIZES ON ESSAY COMPETITIONS

Two essay competitions—one in Oriya and the other in Bengali are being conducted by the University among the registered college students of the University. A cash prize of Rs. 100 is paid to the best writer in each case.

ENDOWMENT FOR FOREIGN STUDIES AND STUDIES IN
OTHER UNIVERSITIES IN INDIA

A sum of Rs. 12,000 has been donated to form the nucleus of a Fund for giving interest-free loans to young men and women for going abroad for higher studies. The University has also made provision of a sum of Rs. 15,000 in its budget estimates for the purpose during the current year.

A sum of Rs. 5,000 has been provided for interest-free loan to students for higher studies in other Universities in India.

INSTITUTION OF A CHAIR IN PHYSICS

A sum of Rs. 8,00,000 has been donated by His Highness the Maharaja of Mayurbhanj to create a Chair in Physics under the auspices of the University. The Chair in Physics at the Post-Graduate stage has been created and the course has started functioning in the Ravenshaw College with effect from the beginning of the academic session 1951-52.

RESULTS OF EXAMINATIONS, 1956

<i>Name of Examination.</i>	<i>No. Passed.</i>
I.A. (Supplementary)	234
I.Sc. (Supplementary)	185
I.Com. (Supplementary)	16
B.A. (Pass) (Supplementary)	116
B.Sc. (Pass) (Supplementary)	21
B.Com. (Supplementary)	13
LL.B. Part I—June	18
LL.B. Part I—November	30
LL.B. Part II—June	37
LL.B. Part II—November	12
Diploma in French Language	1
Diploma in German Language	—
Certificate in French	4
Certificate in German	16
M.A. & M.Sc. Part I :—	
English	1
History	6
Economics	4
Oriya	6
Mathematics (Sc.)	1
Mathematics (Arts)	1
Physics	—
Botany	5
Chemistry	3
M.A. & M.Sc. Part II :—	
English	2
History	2
Economics	3
Oriya	5
Mathematics (Sc.)	1

<i>Name of Examination.</i>	<i>No. Passed.</i>
Mathematics (Arts)	—
Botany	3
Chemistry	3
Physics	3
M.A. & M.Sc. (Whole) :—	
English	3
History	6
Oriya	5
Economics	10
Mathematics (Sc.)	2
Mathematics (Arts)	1
Botany	2
Chemistry	3
Physics	2
B.V.Sc. & A.H. (Supplementary)	6

RESULTS OF EXAMINATIONS, 1957

I.A. (Annual)	465
I.Sc. (Annual)	439
I.Com. (Annual)	24
B.A. (Annual)	140
B.Sc. (Annual)	67
B.Com. (Annual)	48
B.A. (Hons.)	96
B.Sc. (Hons.)	65
B.Ed.	130
I.Sc. (Engg.)	48
I.Ag. (Annual)	25
B.V.Sc. (1st Examination)—Part I	27
B.V.Sc. (1st Examination)—Part II	12
B.Ag. (Annual)	16
LL.B. (May, '57)	28
M.B.B.S. (April, '57)	25
B.O.L.	1
Ph.D.	1

CONVOCATION

The Thirteenth Annual Convocation for conferring degrees in Arts, Science, Law, Education, Commerce and Medicine was held on the 24th December, 1956 in the Ravenshaw College compound in a pandal specially erected for the purpose. Sri Bhimsen Sachar, the Chancellor of the University presided and delivered the Convocation address.

The number of candidates admitted to the various degrees is given below :—

	<i>In person</i>	<i>In absentia</i>	<i>Total</i>
Ph.D.	2	2	4
Master of Science	15	5	20
Master of Arts	26	11	37
Bachelor of Laws	29	34	63
Bachelor of Medicine & Bachelor of Surgery	25	2	27
Bachelor of Education	74	67	141
Bachelor of Science	79	43	122
Bachelor of Arts	286	135	421
Bachelor of Commerce	22	21	43
Total	558	320	878

INTER-UNIVERSITY BOARD

The University continues to be a member of the Inter-University Board of India and is represented by its Vice-Chancellor, Dr. P. Parija.

The University also continues to be a member of the Association of Universities of the British Commonwealth.

UNIVERSITY LIBRARY

The University Library consists of: (1956)

- | | |
|---|-----------------|
| (a) Books of various categories | 22,856 volumes. |
| (b) Palm-leaf manuscripts on various subjects | 895 volumes. |
| (c) Periodicals (individual number) | 177 volumes. |

For the purpose of purchasing books for the library a lump sum grant is provided in the Annual Budget of the Utkal University, but the major portion of the allotment for purchase of books is made by the University Grants Commission.

The University Library has established Inter-Library loan facilities with the Libraries of the University of Bombay and Calcutta and other Indian Libraries.

EXTENSION LECTURES

To promote the culture and outlook of the University students, the University extends invitation to eminent scholars and educationists for delivering lectures under the auspices of the University each year at different times.

UNIVERSITY CAMPUS

With the approval of the University Grants Commission and the State Government, the University has decided to locate the University Campus at Bhubaneswar. The area of the campus is about 400 acres. Plans and designs are now under preparation and it is expected to start construction of buildings from January, 1958. At present the University is located in a building at Cuttack given by the State Government.

ENCOURAGEMENT AND IMPROVEMENT OF
ORIYA LANGUAGE AND LITERATURE

With the help of a Committee appointed by it, the University continued to administer the funds placed at its disposal by the Government of Orissa for the purpose of encouragement and improvement of Oriya Language and Literature.

During the year under report the University decided to publish an Oriya Encyclopaedia. For this, the Senate approved the appointment of staff consisting of:—

1. Chief Compiler	..	One
2. Assistant Chief Compiler	..	One
3. Pandit-cum-scribe	..	One
4. Stenographer	..	One
5. Daftry	..	One
6. Peon	..	One

The work in connection with the Encyclopaedia has already started.

UNIVERSITY PUBLICATIONS

Syllabus and courses of studies, calendars, text books and unpublished books in Oriya Language and Literature recommended for publication by the Oriya Language Improvement Committee.

FINANCE

Total Receipt during 1956-57 Rs. 16,80,806-15-0.

GENERAL

*Coaching Classes for the candidates preparing
for the I.A.S. and O.A.S. examinations*

To help the growing need of the candidates preparing for the I.A.S., O.A.S. and other competitive examinations conducted by the Union and State Public Service Commissions, the University has been organising coaching classes every year since 1953. Coaching is given in the following subjects :—

1. English.
2. Political Science.

3. Economics.
4. Mathematics (Applied).
5. History (World History, Indian History and British History).
6. Law (International & Constitutional).
7. Viva-voce and General Knowledge.

Previously the period of coaching was fixed for four months from May to August but the Syndicate of the University has decided to extend the period of coaching to six months in two terms from the year 1956 and has passed a set of rules for governing the same.

A fee of Rs. 10/- per month is payable by each student admitted to the coaching classes.

VISVA - BHARATI UNIVERSITY

SANTINIKETAN

Postal Address : Santiniketan, District Birbhum, West Bengal.

Telegraphic Address : Visvabharati, Santiniketan.

Telephone : BOLPUR 21 and 22.

DATES OF ESTABLISHMENT AND INCORPORATION

The University was established in 1921 and incorporated in 1951 as a Central University by Act XXIX of 1951 of the Indian Parliament.

FOUNDED BY RABINDRANATH TAGORE

Chancellor :

Jawaharlal Nehru

Vice-Chancellor :

Satyendranath Bose, D.Sc.

AIMS AND OBJECTS

To study the mind of Man in its realization of different aspects of truth from diverse points of view.

To bring into more intimate relation with one another, through patient study and research, the different cultures of the East on the basis of their underlying unity.

To approach the West from the standpoint of such a unity of the life and thought of Asia.

To seek to realize in common fellowship of study the meeting of the East and the West and thus ultimately to strengthen the fundamental conditions of world peace through the establishment of free communication of ideas between the two hemispheres.

And with such ideals in view to provide at Santiniketan a Centre of Culture where research into and study of the religion, literature, history, science and art of Hindu, Buddhist, Jain, Islamic, Sikh, Christian and other civilizations may be pursued along with the culture of the West, with that simplicity in externals which is necessary for true spiritual realization, in amity, good fellowship and co-operation between the

thinkers and scholars of both Eastern and Western countries, free from all antagonisms of race, nationality, creed or caste.

INTRODUCTION

Visva-Bharati grew out of Santiniketan Asrama founded by the Poet's father, Maharshi Devendranth in 1863. The Asrama was meant to be a retreat where seekers, after Truth might come and meditate in peace and seclusion. In 1901 an experimental school was started at Santiniketan by Rabindranath Tagore with the object of providing for a limited number of children of the new generation an education which would not be divorced from Nature, where the pupils could feel themselves to be members of a large community and where they could learn and grow in an atmosphere of freedom, mutual trust and joy. Since 1921 Santiniketan has been the seat of Visva-Bharati, an international university seeking to develop a basis on which the cultures of the East and West may meet in common fellowship. Visva-Bharati has recently been incorporated as a University by Act XXIX (1951) of the Indian Parliament.

Visva-Bharati is an all-India institution with students and teachers drawn from all over India and there is always a fair mingling of teachers, students and visitors from abroad. Students live a community life, dining in the same halls (with separate arrangements for vegetarians and non-vegetarians), playing in the same spacious play-grounds close to the hostels, organizing common socials, picnics, excursions, literary and musical entertainments.

Visva-Bharati Central Library contains above 1,30,000 volumes. There are sectional libraries attached to various departments. The University has its own Hospital with a Medical Officer and his assistants. There are also spacious sick-rooms attached to the girls' hostel, attended by the Medical Officer and equipped with adequate nursing facilities. Boys have separate hostels attached to various departments, while all girl pupils have a common hostel called Sri Sadana. The University has its own water supply plant while electricity is supplied by the State Electricity Board. The Guest House, which makes catering arrangements of its own, is open to visitors and guardians.

Santiniketan, a quiet spot in the midst of open country, is situated about 100 miles from Calcutta. The climate is one of the healthiest in West Bengal. Average annual rainfall 50". Railway Station: *Bolpur* (Santiniketan) on the Sahebganj Loop Line of the Eastern Railway.

Besides the academic institutions mentioned below, the University conducts two Departments: one for Rural Reconstruction and the other for Publication of Books of educational and cultural interest. The Palli-Samgathana Vibhaga (Rural Reconstruction Institute) at Sriniketan is concerned mainly with a comprehensive study of the problems of rural

life in its social, cultural, economic and other aspects and extension work in the villages on the basis of such a study. The Institute maintains a Model Primary School for rural children, a Teachers' Training school for serving primary education in rural areas as well as an agency for propagation of folk education and social education. There is a section for rural industries where training is provided to apprentices in a variety of crafts.

COLLEGES AND INSTITUTIONS

Visva-Bharati maintains the following Colleges and Institutions which are all co-educational and residential.

Patha-Bhavana (School Section) :

It provides instruction for the School Certificate (Matriculation) Examination.

The Medium of instruction is Bengali. Minimum age-limit is 6 for admission to the lowest Group (9 years below Matric) and the upper age-limit is 12.

Siksha-Bhavana (Higher Secondary) :

It provides instruction for the Senior School Certificate (Intermediate) Examination. Subjects offered are: Bengali, Hindi, English, Sanskrit, History, Logic, Elements of Politics and Economics, Mathematics, Physics, Chemistry, Botany, Geography and Biology. Close personal attention and tutorial help, emphasis on social, cultural, and other co-curricular activities are some of the distinctive features.

NOTE: Visva-Bharati has in contemplation a re-organisation of the *Patha-Bhavana* and *Siksha-Bhavana*. This will include a revision of the present system of examinations. Details about the new system of examinations will be published later. It has been decided that the present School Certificate (Junior) Examination, equivalent to the old Matriculation Examination will be discontinued after 1960.

A student passing the Junior School Certificate Examination may be admitted in Class IX in schools in W. Bengal and perhaps in Technical Schools and Polytechnics. There will be two Certificate examination one Junior, at the average age of 14 and one Senior, at the average age of 17. The standard of the Senior School Certificate will certainly be equivalent to the Higher Secondary School Examination which is contemplated in W. Bengal and may even be a little higher in some subjects. It is contemplated that the holder of a Senior School Certificate will be able to apply for immediate admission to the Universities and the Technical Colleges in India; he or she will, of course, be subject to any special admission examination that may be required by some Universities and Technical Colleges.

Vidya-Bhavana (College of Under-Graduate and Post-Graduate Studies and Research) :

It provides instruction for the B.A. Honours Examination in the following subjects: Sanskrit, Indology, Bengali, Hindi, Oriya, English, General History, Economics and Philosophy.

Henceforth M.A. Examination will be held in 6 papers in the following subjects: Bengali, Hindi, Oriya, English, Philosophy, Ancient Indian History & Culture and Sanskrit. Fresh entrants will not be allowed the option of thesis in lieu of two written papers.

It also conducts Ph.D. courses in any subject in which instruction is provided. The Post-Graduate Section is mainly concerned with Indological Studies,—Studies in Vedic, Puranic, Buddhistic, Jain, Zoroastrian and Islamic Culture and in the major languages and literatures of India.

Vinaya-Bhavana (College of Teaching) :

It provides instruction for the Degree of B.Ed., the course being for one year. A special feature of the course is training in craft and other creative activities in addition to the theoretical and practical subjects.

Through a Department of Extension Services it conducts (1) In-service Week-end and Vacation Courses, (2) Seminars and Conferences, (3) Audio-Visual Aids, Educational Film Shows and Exhibitions, (4) Library Service, (5) Publication & Field Researches, (6) Advisory and Guidance Service through school visits.

One-year Diploma Course in *Activity Education* is also available. Persons with B.Ed. Degree of Visva-Bharati or its equivalent of other Universities and graduates with degrees or diplomas of Basic Training Institutes are eligible for admission to this course. This course combines higher theoretical instruction in Principles, Experimental Psychology, Pedagogy, Administration etc. with a full programme of practical activity and research.

In addition to the above, Vinaya-Bhavana has the *Siksha-Charana* (Basic Teachers' Training School) attached to it which provides instruction in both theory and practice of Basic Education. The trainees are practising school teachers in District Board Schools deputed by various District authorities.

Kala-Bhavana (College of Fine Arts and Crafts) :

It has developed into a well-known Centre of Indian Art. It owes its inspiration to the artistic renaissance in Bengal under the guiding spirit of Acharya Abanindranath Tagore and Dr. Nandalal Bose. Training is provided in Drawing, Painting, Modelling, Sculpture, Etching, Wood-cut, Lino-cut, Fresco painting, Alpana and design-drawing, Embroidery, Batik and Artistic Leather-work. It maintains a museum, a library of books on art and allied subjects and an exhibition hall. The instruc-

tions offered here are (1) Two-year Certificate Course in Artistic Handicrafts, (2) Post-Matric four-year Diploma Course in Art and Craft.

Sangit-Bhavana (College of Music and Dance) :

Instruction here is provided for: (i) three years' course for the Intermediate Examination in Music followed by (ii) two years' Degree Course for the Bachelor of Music Examination in the following subjects—Rabindra-Sangeet; Hindusthani Music; Sitar; Esraj; Manipuri and Kathak and Kathakali and Bharatnatyam Dance. In very exceptional cases non-Matriculates having special aptitude in Music may be admitted to the Intermediate Course in Music and such students will be awarded a Diploma on successful completion of the course.

Other Studies :

Visva-Bharati maintains also under the Post-Graduate College three Research Departments: (1) *Cheena-Bhavana*, (2) *Indo-Tibetan Institute*, (3) *Hindi-Bhavana*, which organise teaching and Research in Chinese, Tibetan and Hindi respectively.

LANGUAGE COURSE

A two-year Certificate Course in Indian and Foreign languages viz. Sanskrit, Bengali, Hindi, Oriya, Chinese, Japanese, Tibetan, French, German and Arabic is available to Post-Graduate and Under-Graduate students. Those who have successfully completed the Certificate Course may continue another year's further study for the Diploma in the same language.

OVERSEAS AND FOREIGN SCHOLARS

Overseas and Foreign scholars are admitted to the colleges and courses of study both as regular and as casual students. Special courses are arranged for such casual students in the post-graduate stage for the study of Oriental Languages such as Bengali, Hindi, Sanskrit, Pali, Chinese and Tibetan as well as in Ancient Indian History, Indology and Indian Philosophy. There are facilities also for such students for the study of Indian Art and Dance. Scholars from all countries share the same community life and participate in all community activities.

FEES AND OTHER CHARGES

The following is the schedule of fees payable in advance by students of different Bhavanas. "Residence fee" includes charges for accommodation and supervision, light, medical aid, sports and the library, and is payable either annually or in monthly instalments. "Tuition fees" are also annual and payable at a time or by monthly instalments. "Boarding fee" is for monthly food expenses, (vegetarian or non-vegetarian) and is not payable when the institution is on vacation. "Registration fee" of Rs. 3/- is charged for admission to a course of the University.

FEES

	Patha-Bhavana	Siksha-Kala-Sangit-Bhavana	Vidya-Vinaya-Bhavana
Admission Fee (Resident Students)	20	25	25
-Do- (Day Scholars)	15	20	25
Admission Fee for Library	1	1	1
† Tuition Fee (per annum)	120	150	—
-Do- (B.A. Pass & Honours)	—	—	150
-Do- (M.A. & B.Ed.)	—	—	180
-D- (Doctorate course)	—	—	240
Residence Fee (per annum)	180	150	120
Residence Fee (B.A. Pass & Honours)	—	—	150
Boarding Fee (monthly)	45	45	45
Sports Fee (Day Scholars) per annum	15	15	15
* Medical Fee (-Do-) per annum	15	15	15
Caution Money Deposit	10	15	15
Kitchen Deposit (to meet arrear dues on account of Boarding fee)	50	50	50

N. B. † (i) Also for Day Scholars.

(ii) Laboratory fee Re. 1/- per month per Science subject.

* (iii) Provided that a Day Scholar whose parent or guardian pays a medical fee to Visva-Bharati shall be exempted from it.

(iv) The tuition fee for a Certificate or a Diploma Course is Rs. 120/- per annum.

(v) A deposit of Rs. 10/- for personal expenses is required for the resident students in Patha-Bhavana. This amount is to be replenished every month by the guardian on the basis of actual expenses.

(vi) All remittances are to be made to the Registrar, Visva-Bharati (University).

SRINIKETAN (Department of Rural Reconstruction)

Although Sriniketan is mainly concerned with a comprehensive study of the problems of rural life in its socio-economic aspects and extension work in villages on the basis of such a study, a Faculty of Rural Education from the elementary to the college level is being slowly developed there.

Siksha-Satra (Rural High School) :

Sriniketan maintains a Rural High School for children with a technical stream where craft training is sought to be co-ordinated with academic work. It has both Basic and Senior Basic stages. The session commences from January. Full particulars regarding admission fee, tuition fee, residence fee etc. may be had from the Adhyaksha, Palli Sam-gathana Vibhaga, P. O. Sriniketan, West Bengal.

Silpasadana (Cottage Industries Training Section) :

At Sriniketan there is also a Cottage Industry Training Section, where Certificates are given on successful completion of the Artisan and Junior Courses, and Diplomas are awarded for the Diploma Courses. The session commences from July.

The Artisan Course offers six months training in Basketry, Paper-making, Dyeing & Printing and Book-binding, and also one year's training in Smithy, Woodwork, Weaving, Artistic Leatherwork, Lacquerwork and Glazed Pottery. The candidates should be at least 14 years old and should have read upto Class V of the High School standard.

The Certificate and the Diploma Courses being of two years' and three years' duration respectively offer highly specialised training in Weaving and Wood-work, and in other allied subjects. There is no age limit. Candidates holding School Final Certificate are admissible to the Diploma Course. Candidates having passed the examination of Class VIII in a High School are admissible to the Junior course i.e. two-year course in Wood-work and Weaving.

The Fees payable are: Admission fee Rs. 5/-; Caution deposit Rs. 10/-; Kitchen deposit Rs. 20/-; (for boarders only); Monthly seat rent, light, etc. Rs. 2/-; Annual fees for library, games and examination Rs. 1-8-0; Monthly tuition fee Rs. 5/-; Monthly boarding charges on average Rs. 25/-.

RURAL INSTITUTE

The Institute for Rural Higher Education sponsored by the Council of Rural Higher Education (Government of India) provides instruction for the following courses of studies—

- (i) Three-year Diploma course in rural services,
- (ii) Two-year Certificate course in Agricultural Science,
- (iii) One year preparatory course designed to prepare those who have not passed the Higher Secondary or its equivalent examination.

For particulars please write to the Director, Rural Institute, P. O. Sriniketan, Dist. Birbhum, West Bengal.

BUILDINGS, ETC.

The main buildings of the University comprise the Central Library, Vidya-Bhavana, Kala-Bhavana, Sangit-Bhavana, the School, Vinaya-Bhavana, Siksha-Bhavana, Rural Reconstruction Institute buildings at Sriniketan, Hindi-Bhavana, Cheena-Bhavana, Dinabandhu-Bhavana, Ratan Kuthi Guest House and the New Guest House, the Laboratory, the Refectory, the newly built Stage, Sinha-Sadana Lecture Hall, Students Hostels including Sri-Sadana (Girls' Hostel), Karma-Sachiva's Offices, Vinaya-Bhavana Colony buildings, Staff Quarters at Santiniketan, Sriniketan and Vinaya Palli, etc. An Agricultural Farm is attached to the Rural Reconstruction Department.

Open-air classes are one of the distinguishing features of the University.

The University area comprises about 11.5 square miles.

THE UNIVERSITY AUTHORITIES

The *Samsad* (Court), the supreme governing body of the University; the *Karma-Samiti* (Executive Council), the University executive body; the *Siksha-Samiti* (Academic Council), which deals with academic matters only

APPOINTMENTS

All appointments are made, subject to general control of the *Samsad* (Court), by the *Karma-Samiti* (Executive Council) on the recommendation of a Selection Committee including the Vice-Chancellor and the Principals of the College concerned.

LIBRARIES

The Central Library contains about 1,30,000 volumes. There are, Seminar and Libraries attached to various departments.

THE UNIVERSITY PRESS

The University has its own Press at Santiniketan which prints various publications under the imprimatur of Visva-Bharati.

PUBLICATIONS

The University has a committee to look after its Research Publications, namely the Research Publications Committee. Subjects of study may broadly be grouped to fall under Indology, Sinology, Philosophy, Literature, etc., brought out through two organs styled (i) *Visva-Bharati Annals*, (ii) *Sahitya Prakasika*.

In addition to the Research Publications, two quarterly cultural organs are published—'The *Visva-Bharati Quarterly*' (in English), '*Visva-Bharati Patrika*' (in Bengali) and also a monthly news bulletin named '*Visva-Bharati News*'.

A Publishing Department of the University functions in Calcutta. The department handles the copyright of the Bengali works as well as some of the English works of Tagore. Publications brought out can be classified as follows :—

- (i) Works of Rabindranath Tagore including a serial publication of the complete works edited with annotations ;
- (ii) Series of books for peoples' education ;
- (iii) Series of books on general knowledge ; and
- (iv) Juvenile books including school text books.

OFFICERS OF THE UNIVERSITY

According to the Visva-Bharati Act, the positions of the Paridarsaka (Visitor) and the Pradhana (Rector) of the University are held respectively by the President of India and the Governor of West Bengal. In the period of report, the following were the officers of the University :—

Acharya (Chancellor) :

Jawaharlal Nehru, M.A. (Cantab).

Upacharya (Vice-Chancellor) :

Prof. S. N. Bose, D.Sc. (Cal.)

Artha-Sachiva (Honorary Treasurer) :

Nripendra Chandra Mitra, Solicitor to the Govt. of West Bengal.

Karma Sachiva (Registrar) :

Sailes Chandra Chakrabarty, M.Sc., LL.B.

Granthagarika (Librarian) :

Sj. Bimal Kumar Datta, M.A., Dip. Lib.

Chatra-Parichalaka (Proctor) :

Saumitra Sankar Das Gupta, M.A.

PRINCIPALS OF THE BHAVANAS AND DIRECTOR OF VIBHAGAS

<i>Vidya-Bhavana</i>	— Dr. Siddeswar Bhattacharya, M.A., Ph.D. (Lond.), D.Litt. (Lille), Nyaya-Vai- sesitta-Acharya, Barrister-at-Law.
<i>Siksha Bhavana</i>	— } Sudhir Chandra Roy, M.A.
<i>Patha-Bhavana</i>	
<i>Vinaya Bhavana</i>	— Anath Nath Basu, M.A. (Lond.).
<i>Kala Bhavana</i>	— Dhiren Krishna Dev Barman.
<i>Sangit Bhavana</i>	— Sailaja Ranjan Mazumdar, M.Sc.
<i>Publishing Department</i>	— Pulinbehari Sen, M.A.
<i>Department of Rural Reconstruction</i>	— { Dhirananda Roy.

INCOME & EXPENDITURE ACCOUNT FOR THE YEAR
ENDING 31ST MARCH, 1956.

A. Income.

<i>Group "A"</i>	Rs.
Academic	2,27,524
Non-academic	1,72,793
Palli Samgathana Vibhaga (excluding Cottage Industry Extension & Rehabilitation)	1,33,118
Government Grants	7,24,584
Donation	12,000
	<hr/> 12,70,019
Deficit	1,20,801
Total	13,90,820
 <i>Group "B"</i>	
Cottage Industry Extension & Rehabilitation	3,06,304
Visva-Bharati Publishing Department (including 'Visva-Bharati Patrika')	<hr/> 14,04,118
Loss : Cottage Industry Extension & Rehabilitation	17,443
Total	<hr/> 14,21,561
Grand Total	<hr/> 28,12,381

B. Expenditure.

<i>Group "A"</i>	
Academic	5,84,762
Non-academic	4,61,571
Palli Samgathana Vibhaga (excluding Cottage Industry Extension & Rehabilitation)	3,44,487
Total	<hr/> 13,90,820
 <i>Group "B"</i>	
Cottage Industry Extension & Rehabilitation	3,26,747
Visva-Bharati Publishing Department (including 'Visva-Bharati Patrika')	10,34,665
	<hr/> 13,61,412
Profit : Visva-Bharati Publishing Department (including 'Visva-Bharati Patrika')	60,149
Total	<hr/> 14,21,561
Grand Total	<hr/> 28,12,381

GORAKHPUR UNIVERSITY

INTRODUCTION : CHARACTER OF UNIVERSITY

It was in 1948 that the idea of establishing a University at Gorakhpur was first originated by the then District Magistrate, Sri S. N. M. Tripathi, I.A.S. The main idea about this University was the establishment and incorporation of a regional teaching and affiliating University for the eastern districts of U.P. It was intended to make it free from the inevitable defects of a purely affiliating University. The idea found favour with the State Government and it was in furtherance of this object that the Gorakhpur University Act of 1956 was passed by Uttar Pradesh Legislature in May 1956. The Act received the assent of the Government of U.P. on June 5, 1956. It was brought into force from 3rd August, 1956 by Government Notification No. C-3298/XV-55 (7)/1956. The Governor of U.P. in exercise of the powers conferred on him by Transitory Provision of the Act appointed Sri B. N. Jha, B.Ed. (Edin.), Vice-Chancellor, Allahabad University, as the first Vice-Chancellor and Sri S. N. M. Tripathi, I.A.S., as the first Hony. Treasurer of the newly constituted University. Later on, the Government under Notification No. C-5208/XV-57 (7)/1956 dated Nov. 23, 1957 nominated a provisional Executive Council.

CONSTITUTION OF UNIVERSITY

Its First Statutes are under the consideration of the Government and as soon as they are finalised steps will be taken to constitute the respective Authorities and permanent Bodies of the University under the Act. This University is first of its kind in U.P. in so far as it has the power of making provision for imparting instructions in different branches of learning, of furthering the prosecution of original research and of guiding and controlling the work of affiliated Colleges situate within the territorial jurisdiction of the University. Its another notable feature is the establishment of constituent Colleges, that is institutions maintained by the University or by the State Government and authorized to conduct all teaching necessary for admission to degree or the diploma of the University. The constituent Colleges shall be those as may be named by the Statutes. Further, all Post-Graduate teaching will be concentrated at the University teaching Departments.

JURISDICTION

The powers conferred on the University shall be exercisable in the area included at the commencement of this Act in the districts of Gorakhpur, Deoria, Basti, Azamgarh, Ballia, Ghazipur, Gonda, Bahraich and Jaunpur.

OFFICERS OF UNIVERSITY

Chancellor :

Sri V. V. Giri, Bar-at-Law, Governor of Uttar Pradesh.

Vice-Chancellor :

Sri B. N.-Jha, B.Ed. (Edin).

Hony. Treasurer :

Sri S. N. M. Tripathi, M.A., I.A.S. (Retd.),
Member, Public Service Commission, U.P.

Registrar :

Sri Narain Dass Gothi, M.A., L.T., P.E.S. (Retd).

Hony. Librarian :

Sri Govind Chandra Pandey, M.A., D.Phil.

TEACHING DEPARTMENTS

The Vice-Chancellor framed the First Ordinances, Regulations and Syllabi for various courses of study which received the assent of the Chancellor early in June 1957 and the University started normal functioning from the academic year 1957-58 only with the following Post-graduate Teaching Departments :

1. English.
2. Education.
3. Psychology.
4. Ancient History & Culture.
5. Sanskrit.
6. Commerce.

At the end of the session the University Departments consisted of the staff noted below :

<i>Department</i>	<i>Staff</i>
<i>Education</i>	— Sri S. P. Misra, M.A. (Minnesota) Dr. R. N. Varma, M.A., Ph.D. Dr. R. S. Varma, M.A., D.Phil. Sri Thakur Gur Prasad, M.A.
<i>Education</i>	— Sri Manmohan Varma, M.A., M.Ed., B.Ed. (Edin.) Sri S. D. Singh, M.A., M.Ed. Sri R. K. Gupta, M.Ed., M.A. (London), F.S.S. (London). Sri P. S. Nagar, M.A., M.Ed. Sri R. K. Joshi, M.Sc., M.Ed. Sri H. C. Sinha, M.A., M.Sc., L.T.

<i>Department</i>	<i>Staff</i>
	Sri B. B. Singh, M.A., M.Ed. Sri R. P. Barnwal, M.A., M.Ed. Sri G. S. Pandey, M.A., M.Ed. Smt. Vimla Mehta, M.A., M.Ed. Smt. Indra Grover, M.A., L.T.
<i>Psychology</i>	— Dr. M. M. Sinha, M.A., M.S., Ph.D. (Oregon, U.S.A.) Sri S. B. L. Bharadwaj, M.A., L.T. Sri L. B. Tripathi, M.A., Dip. Psychology.
<i>Ancient History & Culture</i>	— Dr. Govind Chandra Pande, M.A., D.Phil., (Member, Societe Asiatique de Paris). Dr. R. B. Singh, M.A., Ph.D. Dr. K. C. Ojha, M.A., D.Phil. Sri S. N. Chaturvedi, M.A.
<i>Sanskrit</i>	— Dr. V. P. Upadhyaya, M.A., B.L., D.Litt. Dr. D. N. Shukla, M.A., Ph.D., D.Litt. Sri Vidya Niwas Misra, M.A. Dr. S. K. Gupta, M.A., Ph.D.
<i>Commerce</i>	— Dr. A. B. Misra, M.A., D.Litt. Sri P. K. Dwivedi, M.Com. Sri A. P. Baijal, M.Com. Sri P. N. Singh, M.Com.

AFFILIATED COLLEGES

Under the U.P. Government Notification No. C 1744/XV-55 (7) /56 dated May 2, 1957 the first nine Colleges given in the list below, situate in the districts mentioned in Section 4 of the Gorakhpur University Act 1956, which were at the commencement of the said Act affiliated to the Agra University were, with effect from the date of publication of that notification, declared to be affiliated to this University. Affiliation to Colleges mentioned from No. 10 to 12 was given by this University in the academic year 1957-58. The affiliated Colleges will teach only for the first degree courses.

<i>Name of College</i>	<i>Name of Principal</i>
St. Andrew's College, Gorakhpur.	Sri M. O. Varkey, M.Sc.
S. N. College, Azamgarh.	Sri Shaukat Sultan, M.A., B.A. (Hons), LL.B.
S. C. College, Ballia.	Sri G. L. Jha, M.A. (Acting).
T. D. College, Jaunpur.	Sri H. N. Singh, M.A., B.A. (Hons), B.T., M.L.C.
M. P. College, Gorakhpur.	Dr. H. P. Shahi, M.A., B.T. Ph.D.
Buddha College, Kushinagar.	Sri R. S. N. Tripathi, M.A., L.T.

<i>Name of College</i>	<i>Name of Principal</i>
M. L. K. College, Balrampur.	Sri R. K. Vaish, M.Sc.
T. D. College, Ballia.	Sri S. R. Chaturvedi, M.A., LL.B., B.T.
D. M. College, Deoria.	Dr. P. L. Misra, M.Sc., Ph.D.
Degree College, Ghazipur.	Sri A. P. Chaubey, M.A. (Acting).
D. A. V. College, Azamgarh	Dr. Chaityna Swroop, M.Com., Ph.D. (Acting).
Hindu College, Zamania, Ghazipur.	Sri Balmukund Gupta, M.A.

DEGREES, ADMISSION TO EXAMINATIONS AND PERIOD OF STUDY

The University offers the following degrees and diplomas :—

<i>Name of the Degree or Diploma</i>	<i>Minimum Admission Requirements</i>	<i>Duration of Course in years</i>
B.A.	(i) Intermediate of U.P. Board or of an Indian University in- corporated by law, or (ii) any other examination recognised by the University as equivalent thereto.	Two Years.
B.Ed.	Bachelor's or Master's degree of this University or some other Indian University recog- nised for the purpose by the Executive Council.	One Year.
B.Sc.	Same as for B.A.	Two Years.
B.Sc. (Ag.)	Intermediate Examination in Agriculture of U.P. Board or any other examination in Agriculture recognised by the University as equivalent thereto	Two Years.
B.Com.	(i) Commercial Diploma Exa- mination of the Allahabad Uni- versity, or the Commercial Diploma Examination of U.P. Board or the Intermediate exa- mination in Commerce of U.P. Board, (ii) B.A. Examination with Economics (iii) M.A.	

<i>Name of the Degree or Diploma</i>	<i>Minimum Admission Requirements</i>	<i>Duration of Course in years</i>
	(Previous) Examination in Economics of Allahabad University (iv) M.A. Examination of any University (v) Intermediate Examination in Arts & Science of the Andhra University with Banking, Accountancy & Commercial Geography (vi) Intermediate Examination with Economics (vii) Final Examination for full course certificate of the Government Commercial Institute, Calcutta after having passed the Matriculation or any equivalent Examination of any University or Board established by law in India. (viii) Intermediate examination in Commerce of the Nagpur, Travancore, Banaras and Aligarh Universities.	Two Years.
LL.B.	Bachelor's degree of the University or of an Indian University recognised for the purpose by the Vice-Chancellor or M.A. degree of the University (after passing an Oriental Examination and B.A. in General English and English Literature), provided that no candidate shall be allowed to combine legal studies with any other post-graduate Course except that leading to the M.A. or M.Sc. in Mathematics or M.Com. degree.	Two Years.
M.A.	Bachelor's degree of the University or of an Indian University recognised for the purpose. The following are also eligible for admission:—	

<i>Name of the Degree or Diploma</i>	<i>Minimum Admission Requirements</i>	<i>Duration of Course in years</i>
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A candidate who has passed :—

- (i) The Alankar Examination of Gurukul Kangri, or
- (ii) The Shiromani Examination of Gurukul Brindaban, or
- (iii) The B.A. Examination of Jamia Millia, Delhi or
- (iv) The Shastri Examination of Kashi Vidyapitha, or
- (v) The Acharya Examination of Govt. Sanskrit College, Varanasi or Banares Hindu University.

They shall be admitted to the previous examination for the degree of Master of Arts in subjects specified below :—

- (a) The Alankars of Gurukul Kangri to Sanskrit, Hindi, Philosophy, Economics, History, Politics and Shiromanies or Gurukul Vrindaban to Sanskrit, Hindi, Philosophy, Economics and Politics.
- (b) B.A.'s of Jamia Millia to Persian, Urdu, Philosophy, Economics and Politics.
- (c) The Shastris of the Kashi Vidyapith to English, Hindi, Sanskrit, Philosophy, History, Sociology, Politics and Economics.
- (d) The Acharyas of Government Sanskrit College, Banares or Acharyas of Banares Hindu University to Sanskrit.

A candidate who wishes to pursue a course of study for the M.A. Examination of this University in English Literature and has passed :

- (i) The Alankar Examination of Gurukul Kangri or

<i>Name of the Degree or Diploma</i>	<i>Minimum Admission Requirements</i>	<i>Duration of Course in years</i>
	(ii) The Shiromani Examination of Gurukul Brindaban, or (iii) The B.A. Examination of Jamia Millia, Delhi, shall be allowed to do so after he has passed the B.A. Examination of this University in General English and English Literature.	Two Years.
M.Sc.	B.Sc. Degree of the University or of an Indian University recognised for the purpose.	Two Years.
M.Com.	(i) Holding a B.Com. Degree of the University or of an Indian University, recognised for the purpose. (ii) Graduates in Arts of any recognised Indian University with Economics as one of their subjects.	Two Years.
M.Ed.	Had passed the B.Ed., B.T. or L.T. Examination or an equivalent examination held by a State Government or by any University in India recognised by Law of the place in which it is situated or of any university or body which the Academic Council may recognise for the purpose.	Two Years.
Diploma in French or German.	Intermediate of U.P. Board or of an Indian University incorporated by any law for the time being in force or an examination recognised by the University as equivalent thereto.	Two Years.
Diploma in Indian Music.	Same as above.	Two Years.

<i>Name of the Degree or Diploma</i>	<i>Minimum Admission Requirements</i>	<i>Duration of Course in years</i>
Diploma in Social Work,	B.A. with Sociology as one of the optional subjects, or in I or II Division with at least one Social Science (Economics, Philosophy or Politics) of this University or an Indian University recognised for the purpose by the Executive Council.	Two Years.

COURSES OF STUDY AND SCALE OF MARKS

Bachelor of Arts. (Part I and Part II) : Candidates are examined in General Hindi, Indian Culture and General English and any three of the subjects : viz. English Literature, Arabic, Persian, Sanskrit, Hindi, Urdu, Mathematics, Military Science, Philosophy, Education, Psychology, Economics, History, Political Science, Geography, Drawing and Painting, Sociology, Ancient History and Culture and Indian Music. Candidates will have to pass separately in each of the two examinations, but the marks of the two examinations will be counted together for a place on the pass list of the Part II Examination. No division will be assigned on the result of the Part I Examination. A candidate for the B.A. Part II Examination will be assigned First and Second Division if he gets 60 and 48 percent marks respectively of the aggregate. All the rest will be placed in the third Division, if they obtain the minimum pass marks i.e. 33% in each subject.

Bachelor of Science (Part I and Part II) : Candidates are examined in General Hindi, Indian Culture, General English (Optional) and any three of the subjects : viz. Mathematics, Physics, Chemistry, Zoology and Military Science. Part I and Part II Examinations shall be by means of papers and practical tests except in the case of Mathematics which shall be entirely by means of papers. Candidates will be required to pass in theory and practical examinations separately in Part I as well as in Part II Examination, but the marks of the two Examinations will be counted together for a place on the pass list of the Part II Examination. No division will be assigned on the result of the Part I Examination. Percentage of pass marks shall be the same as in B.A.

Bachelor of Science in Agriculture (Part I and Part II) : Every candidate shall be required to pass in General Hindi, Indian Culture, General English (optional to pass) and in the subjects of Part I (i) Crop and Cropping Scheme, (ii) Internal Morphology, Crop systematic and Physiology (iii) Soils Plant Chemistry, Fertilizers and

Manures (iv) **Agricultural Entomology** (v) **Plant Pathology** including **Bacteriology** (vi) **Animal Husbandry and Veterinary Science** (vii) **Agricultural Economics Part II**—(i) **Farm Management, Soil Management and Field Experimentation** (ii) **Farm Machinery** (iii) **Dairying** (iv) **Horticulture** (v) **Genetics and Plant Breeding** (vi) **Dairy Chemistry and Animal Nutrition** (vii) **Agriculture Extension**. Percentage of Pass marks shall be the same as in B.Sc.

Bachelor of Commerce (Part I and Part II) : The following subjects are to be studied in the Part I class : General Hindi, Indian Culture, General English, Commercial and Industrial Organisation, Accountancy, Commercial Law, Principles of Economics and Elements of currency and Banking, Economic Development of Great Britain, U.S.A. and U.S.S.R. Part II—General English, Statistics, Indian Trade Industries and Transport, Hindi Composition and any one of following group.

(a) **Advanced Accountancy and Auditing** (b) **Money, Banking and Foreign Exchange**. (c) **Industrial and Commercial Law and Secretarial Work and Practice**. (d) **Public Finance and Administration**. (e) **Life Assurance and Property Insurance**. (f) **Rural Economics and Co-operation**. (g) **Salesmanship and Advertising**. (h) **Inland and Foreign Trade**. First Division : 60% and above, Second Division : between 48% and 60% of the aggregate marks. All the rest in the Third Division if they obtain minimum pass marks in each subject.

Master of Arts : The Examination for the Degree of M.A. shall comprise of two parts Previous and Final. A candidate may select one of the subjects viz. English Literature, Sanskrit, Persian, Hindi, Urdu, Mathematics, Philosophy, Psychology, Economics, History, Political Science, Sociology, Ancient History, Culture and Archaeology. Candidates who obtain 60 per cent or more of the aggregate marks are placed in the First Division whereas those who obtain 48 per cent or more in the Second Division. The rest will be placed in the Third Division provided they get minimum 36 per cent of the aggregate marks. There will also be a viva voce.

Master of Science : At present University Examination will be held in Mathematics only. There will be four papers in Previous and five papers in Final. The percentage of Pass marks shall be the same as in M.A.

Master of Commerce : The Examination for the Degree of M.Com. shall comprise of two parts—Previous and Final. In Previous Advanced Business Economics and in Final Statistics are compulsory papers. Out of the following papers, candidates shall be required to take any three papers in the Previous and any three in the Final (1) **Organisation of Industries in India** (2) **Corporation Finance** (3) **Organisation of Markets** (4) **International Banking and Foreign Exchange** (5) **International Trade and Fiscal Policy** (6) **Transport** (7) **Advanced Insurance** (8) **Rural**

Economics (9) Co-operation (10) Economics Activities of the State (11) Public Economics (12) Monetary Theory and Practice (13) Social Security (14) Indian Statistics (15) Company Organisation and Factory Management (16) Income-tax—Law and Accounts (17) Economic Planning with special reference to India (18) Labour Organisation management and Welfare. There will also be a *viva voce* on General Commercial knowledge. The percentage of pass marks shall be the same as in M.A.

PROFESSIONAL COURSES

Bachelor of Education :— The candidates are required to undergo course both in theory and practical. In theory they have to offer (i) Educational Psychology, (ii) Foundation of Education, (iii) School Organization and Health Education, (iv) Western Educational Thought and Development of Indian Education, and (v) Methods of Teaching. The divisions at the B.Ed. examination shall be assigned separately for theory and practice. Candidates will be placed in First and Second Divisions if they obtain 60% and 48% respectively of the aggregate marks in theory and practical. All the rest will be placed in Third Division if they obtain minimum pass marks, i.e., 36%. Practical test will carry 200 marks out of which 80 should be obtained to pass, 100 marks will earn a II Division and 150 I Division. There will be a practical test before two external and one internal Examiners and the candidate will be called upon to give two lessons to Junior and Secondary classes. Any one specialising in a subject must give one lesson in that subject and must get II class marks. The report of the year's work shall be placed before the examiners. Records of 60 lessons can also be scrutinized by the examiners.

Master of Education :— Candidates have to offer (1) Philosophy of Education (including the History and Evolution of Educational Theories (2) Advanced Educational and Experimental Psychology (3) Comparative Education; (4) Problems of Education with special reference to either (a) Pre-Primary and Basic Education, or (b) Secondary and Higher Education; (5) Any one of the following : (i) Guidance in Schools, (ii) Educational Sociology, (iii) Education of Handicapped, (iv) Moral and Religious Education, (v) Educational Measurement, (vi) Diagnostic and Remedial work, (vii) Social Education; and (6) (a) Practical work consisting of tests and experiments conducted under the guidance of Professors, or (b) Field work consisting of Planning and executing some Educational Project under the guidance of Professors and *Viva-voce*. Candidates will be assigned First and Second Division if they obtain at least 60% and 48% respectively of the aggregate. All the rest in the Third Division, if they obtain the minimum pass marks of 36% in each paper.

Bachelor of Laws :— In Previous, candidates have to offer : (1) Roman Law, (2) The Law of Contracts, (3) The Law of Easements and

Torts, (4) The Law of Evidence, (5) Criminal Law and Procedure, (6) Constitutional Law, and (7) Jurisprudence. In Final the candidates have to offer : (1) Civil Procedure and Limitation, (2) The Law relating to Land Tenures, Rent and Revenue in U. P., (3) Hindu Law with Statutory modifications thereof, (4) Mohammadan Law with the Statutory modifications thereof and the Indian Succession Act, (5) The Law relating to Transfer of Property, including the Principles of Equity in so far as they relate to the subjects, (6) Equity with special reference to the Law of Trust and Specific Relief, and (7) Company Law and Income-tax Law. Minimum pass marks 48% of the aggregate, provided that if a candidate fails to secure 36% marks in any individual paper he will be deemed to have failed in the examinations, notwithstanding his having obtained the minimum percentage of marks required in the aggregate for the examination. First Division 60%. Second Division 48% of the aggregate marks.

CONDITIONS FOR RE-ADMISSION TO UNIVERSITY EXAMINATIONS

A candidate who has attended a regular course of study prescribed for an examination in an Affiliated College of the University or a Teaching Department of the University and who has failed once or who in the case of Final M.A. or M.Sc. or M.Com. or LL.B. examinations, has not been able to appear at the said examination on account of serious illness, may be allowed by the Executive Council to appear again at a subsequent examination without attending any further regular course of study provided the Principal of the Affiliated College or a Teaching Department of the University, in which he last studied, recommends his application which, in the case of candidates, serious illness, shall be accompanied by a Medical Certificate.

ADMISSION OF TEACHERS, INSPECTORS IN EDUCATION DEPARTMENT, LIBRARIES, AND WOMEN CANDIDATES TO EXTERNAL DEGREES

External degrees may be awarded as follows :—

(a) In the Faculty of Arts :

B.A. and M.A. except in Experimental Psychology.

(b) In the Faculty of Science :

M.Sc. in Mathematics.

(c) Faculty of Commerce :

B.Com and M.Com.

The examination for an external degree shall be the same as for the corresponding internal degree.

A person to be eligible for admission to an external degree of the University shall be a teacher in some educational institution or an inspecting officer or a woman or a Librarian fulfilling all the requirements prescribed for candidates for the corresponding internal degree except that of having pursued a regular course of study in an Affiliated College or a Teaching Department of the University.

NUMBER OF STUDENTS IN THE UNIVERSITY

After coming into existence of the Gorakhpur University, the examinations of B.A., B.Sc. (Ag.) and B.Com. Part I and M.A., M.Sc. and LL.B. (Previous) students for the year 1958 have been taken by the University but so far the students of Part II and Final classes are concerned, their examinations for 1958 were taken by the Agra University with the consent of the Gorakhpur University and below is given the number of students who appeared at the Part I and Previous examinations of the Gorakhpur University in the year 1958 :

B.A. Part I	2,043
B.Sc. Part I	347
B.Sc. (Ag.) Part I	108
B.Com. Part I	328
M.A. (Previous)	242
M.Sc. (Previous)	17
M.Com. (Previous)	46
LL.B. (Previous)	242
B.Ed.	295
M.Ed.	9

WOMEN'S EDUCATION

Women are admitted to the University and to all the affiliated Colleges on the same footing as men-students. The M. P. College, Gorakhpur, has separate sections for girl-students in which lectures are delivered by lady lecturers.

LIBRARY, MUSEUMS AND LABORATORIES

The University Library has been established very recently. Its affairs are managed by a Library Committee under the chairmanship of the Vice-Chancellor. One of the Heads of Departments has been appointed by the Vice-Chancellor as Hony. Librarian. There is a separate reading room where newspapers and pamphlets, etc., are displayed. The amount spent on books and periodicals during 1957-58 was Rs. 40,000. The total number of volumes in the Library at the end of the year was over 4,000.

The Departments of Ancient History and Commerce have each established a museum and they are being enriched by valuable and

rare collections. The Department of Psychology has got a laboratory. It is being equipped with up to date apparatus and it is proposed to add an animal room to it for conducting researches in comparative psychology.

RESIDENCE, HEALTH AND DISCIPLINE

Every student shall reside in a Hostel maintained by the University or a College or in a Hostel or Lodge recognised by the University or a College or with a parent or guardian.

The University has a three-storied beautiful building of Hostel. Most of the Colleges affiliated to the University provide residential accommodation for a fair proportion of their students.

The Panel of Inspectors is responsible for the periodical inspection of all recognised hostels and lodgings and every College is required to satisfy the Executive Council that the arrangements for the residence of students are satisfactory and that provision is made for the health and recreation of students.

Every student is required, by the end of the second term, immediately following his admission, to present himself for medical examination to the University Medical Officer at the University Dispensary. Arrangements for medical examinations of girl students are made separately. In the affiliated Colleges also adequate medical facilities have been provided.

NATIONAL CADET CORPS

There are two Independent Companies—one at Gorakhpur and another at Jaunpur containing six platoons which are operating at the various affiliated Colleges, controlled by the Ministry of Defence under the National Cadet Corps Act, 1948. It is intended to raise the Corps in the University also from 1958-59.

SIZARSHIPS, BURSARIES AND BOOK-AID

A large number of sizarships are awarded on grounds of poverty as well as merit. Similarly, bursaries are granted to poor meritorious students for ten months at Rs. 60 per month to receive higher education above the Intermediate standard. Assistance is also given to poor and brilliant students for purchase of books.

ASSOCIATIONS IN THE UNIVERSITY

The foundation for a well-guided Union has been laid in the very first year of the University and with a view to framing the Constitution of the Union a Constituent Assembly was also formed. It is hoped that the Union will begin to function from the next year in full swing. Besides, there are the following Associations in the University at present :

The English Study Circle.
 The Education Association.
 The Psychology Association.
 The Commerce Association.
 The Prachaya Bharatiya Parishad.
 The Athletic Association.
 The Girl Students' Association.

EXAMINATION AND OTHER FEES

	Rs.
Examination Previous to Master of Arts.	25
Master of Arts.	35
Master of Arts (with Thesis).	50
Bachelor of Education.	55
Examination Previous to Master of Science.	25
Master of Science.	35
Master of Science (with Thesis).	50
Master of Education.	50
Doctor of Philosophy.	250
Examination Previous to LL.B.	25
Bachelor of Laws.	45
Master of Laws.	150
B.Com. Part I	25
B.Com. Part II.	25
Bachelor of Arts Part I.	25
Bachelor of Arts Part II.	25
Bachelor of Science Part I.	25
Bachelor of Science Part II.	25
Examination Previous to Master of Commerce.	25
Master of Commerce.	35
Master of Commerce (with Thesis).	50
Bachelor of Science in Agriculture Part I.	25
Bachelor of Science in Agriculture Part II.	35
Admission to an examination in one subject at the B.A., B.Sc. or B.Com. Examination.	20
Supplementary B.A. Part I or Part II, B.Sc. Part I or Part II, B.Com. Part I or Part II, B.Sc. (Ag.) Part I or Part II.	15
Supplementary LL.B. (Previous) in all papers or more than one paper.	25

	Rs.
Supplementary LL.B. (Final) in all papers or more than one paper.	45
Supplementary LL.B. (Final) in one paper only.	15
Admission to B.A. Part I or B.A. Part II examination in General English and one more subject.	15
Enrolment Fee.	4
Fee for the re-totalling of marks.	10
Fee for obtaining marks obtained at a University Examination.	2
Fee for Diplomas.	10
Fee for obtaining Migration Certificates.	5
Fee for copy of entries in the Enrolment Register.	2

BUDGET

The University chiefly depends on Government grants to meet its recurring and non-recurring expenditure.

	Rs.
Estimated Receipts during 1958-59.	23,43,230
Estimated Expenditure during 1958-59.	26,40,795
Estimated deficit for 1958-59.	2,97,565
Add Estimated deficit for 1957-58 (revised after excluding provision made for opening Science classes which has been provided afresh in 1958-59 (Rs. 6,87,540 — Rs. 6,10,000)	77,540
Estimated deficit on March 31, 1959	3,75,105

GENERAL

In July 1958 it is expected that the University will begin to function in full swing with the additions of Departments of Modern and Medieval History, Hindi, Political Science, Economics, Geography, Sociology, Philosophy, Music, Military Science, Drawing and Painting, Physics, Chemistry, Botany, Zoology and Mathematics. It is also intended to institute from the ensuing session Diploma Courses in Statistics, Photography, Drawing and Painting, Asiatic Languages and Russian. It is designed to give a special bias so far as Agriculture, Cottage Industry and such other allied subjects are concerned. The Science Block has been completed at a cost of Rs. 10 lacs. The University has a land of about 200 acres in area. The construction of buildings on that site for the Senate Hall, various departments, hostels and staff quarters constitute a master plan which will cost about Rs. 1½ crores.

APPENDIX

BHANDARKAR ORIENTAL RESEARCH INSTITUTE, POONA-4

HISTORY

The idea of establishing an Oriental Institute offering facilities to research workers and at the same time commemorating the work and the name of the late Sir Ramakrishna Gopal Bhandarkar originated towards the middle of 1915. The scheme was received enthusiastically and with public support, Government sympathy, and chiefly the noble aid rendered by the Tatas and the Jain Community, the scheme soon materialised and the Institute was formally inaugurated by His Excellency Lord Willingdon, the then Governor of Bombay, on the 6th of July 1917, the 30th Birthday of Sri Ramakrishna, when a Volume of commemorative essays written for the occasion by several Indian and European scholars was also presented to him. The Institute began its work in June 1918 when the Government of Bombay were pleased to transfer to the Institute the Manuscripts library formerly at the Deccan College (together with the annual maintenance grant of Rs. 3,000) as also to hand over to the Institute the management of the Bombay Sanskrit and Prakrit Series together with a yearly grant of Rs. 12,000/- set aside for that purpose. The Main Hall of the Building named "The J. N. Tata Research Hall" was occupied in 1918 and the two side-halls, named "The Khetsi Khiasi Manuscripts Hall" and the "Ratan Tata Iranian and Semitic Hall" were occupied in 1922. The total expense on the whole building has been Rs. 1,50,000. The "Press and the Stock Room" for stocking the entire stock of Institute's publications as also the Institute's Press was constructed in 1933 at a cost of about Rs. 35,000/- while the Nizam's Guest House was constructed in this very year at a cost of about Rs. 35,000/- donated by the Government of His Exalted Highness the Nizam of Hyderabad. The Guest House has been fully equipped for the use of Scholars visiting the Institute from outside for purposes of study.

WORK

(i) The Mahabharata Department has been engaged in bringing out a Critical Edition of the Great Epic of India since 1919. The Edition has been universally acknowledged as a monumental work of scholarship. In 1939 the British Academy, London, expressed its appreciation

of this Edition by the award of a token grant to the Institute. This work has also been appreciated by learned bodies of status and standing like the International Congress of Orientalists, the All India Oriental Conference, etc. Eleven Pawans of this Edition have been so far published. Parts of the Edition are not sold singly. For forms of subscription (which can be paid in lump or by instalments) apply to the Secretary, Mahabharata Editorial Board. The First General Editor of the Mahabharata was Prof. N. B. Utgikar from 1919-1924. The Second General Editor who for the first time fixed the principles of textual Criticism for this edition was Dr. V. S. Sukthankar from 1925 upto his sad demise on 21st January 1943. Subsequently Dr. S. K. Belvalkar was appointed General Editor who is now looking after this work for the last fourteen years.

(ii) *Manuscript Department*.—The Manuscript Department looks after the management of the Government Manuscripts Library, which has been attached to the Institute by the Government of Bombay in 1918. This library contains about 20,000 Sanskrit and Prakrit Manuscripts which are lent to *bonafide* scholars all over the world under certain conditions. These Manuscripts were collected for Government by Buhler, Kielhorn, Bhandarkar, Peterson, Kathawate, Pathak and others since 1866, and they form one of the largest and most valuable collections of Hindu and Jain Manuscripts, a collection which is being properly catalogued and looked after by the Institute. Up to now eighteen Volumes of the Descriptive Catalogue of these Manuscripts have been published. Besides the Government MSS. library, the Manuscript Department has been building up steadily a collection of Manuscripts of the Institute itself during the last 35 years. So far about 2,300 Manuscripts have been acquired for this collection.

(iii) The Iranian and Semitic Department was created in 1920 for the collection and preservation of the Avesta, Pehalvi, Persian and Arabic Manuscripts. A number of old and rare Manuscripts has been already collected and a library of printed books pertaining to these subjects is also being built up gradually. ..

(iv) The Publication Department, besides conducting the work of the Bombay Sanskrit and Prakrit Series has started a new series called the Government Oriental Series which includes texts as well as independent original works. Amongst the important publications in this Series mention may be made of The Collected Works of Sri R. G. Bhandarkar " (4 Volumes) a complete Word-index to the Vyakarana-Mahabhasya, History of Hindu Dharmasastra, Vols. I, II, III, IV and V by Mahamahopadhyaya Dr. P. V. Kane, Ghate's Vedanta, the Jinaratnakosa or the Catalogue of all Jain Manuscripts by Prof. H. D. Velankar. A complete list of the publications (over 100) can be had on application. The Institute has started another Series

called the Bhandarkar Oriental Series in which seven works have been so far published. Among these works Dr. B. C. Law's *Tribes in Ancient India* and Dr. Bhaduri's *Studies in Nyayavaisesika Metaphysics* are noteworthy.

(v) The Journal Department looks to the conduct of the *ANNALS* of the Institute which was started as a six-monthly publication in 1919 and is now published quarterly. Members of the Institute obtain the *Annals* free of cost. To others the annual subscription is Rs. 10. So far 37 Volumes of the *Annals* have been published and an Index of articles and authors for Volumes I to XXXIII of the *Annals* has also been published.

(vi) The Library Department looks after the entire collection of printed books and journals belonging to the Institute. The private collection of the late Sir R. G. Bhandarkar was transferred to the Institute in 1925, and consists of over 2,500 old and rare Volumes on Indology. Books from this library cannot be lent out but are available to the Members of the Institute for purposes of study and reference. The Institute also purchases and receives as presents some new books regularly each year, as also a number of learned periodicals of India, Europe and America in exchange for the Institute's *Annals*. Books are also issued to members under certain conditions. For the use of members a Reading Room of Select Oriental Journals, Indian and Foreign, is being built up and brought up-to-date. Some years ago the Government of China presented to the Institute a complete set of Chinese *Tripitaka* consisting of about 80 Volumes and the Government of France presented a number of books on French Literature.

(vii) Post-graduate and Research Department was started in 1927 for the benefit of M.A. students in Sanskrit, Pali, Ardhamagadhi and Ancient Indian Culture. Subsequently the University of Bombay organised its own Post-graduate Department with a special Committee in Poona to look after the entire Post-graduate work carried on in the institutions at Poona. The Institute fully co-operated in the scheme of Post-graduate instruction organised by the Committee during its tenure of office. In 1948, the University of Poona came into existence and this Department of the Institute was recognized as a constituent Institution of that University for the Post-graduate instruction and Research in Sanskrit and Prakrit Languages and Ancient Indian Culture.

The following is the staff in the Department :—

Director :

Prof. R. D. Karmarkar, M.A. Head of the Department of Sanskrit.

Staff :

Prof. P. K. Gode, M.A., D.Litt. Head of the Department of Ancient Indian Culture.

Prof. K. V. Abhyankar, M.A.

The total number of students stands at 9 only. These students receive stipends from the Institute as also from the Poona University.

Hon. Secretary :

Dr. R. N. Dandekar, M.A., Ph.D.

Curator :

Prof. P. K. Gode, M.A., D.Litt.

BOSE RESEARCH INSTITUTE

The Bose Institute was founded on November 30, 1917 by Sir J. C. Bose for the 'fuller investigations of the many ever-opening problems of the nascent science which includes both Life and Non-Life'. In particular investigations were to be undertaken on different aspects of plant life, with a view to the discovery of the fundamental unity in life processes underlying the diversity of their manifestations in plants and animals. The scope of investigations undertaken in the Institute has subsequently been enlarged.

The Institute is registered under Act XXI of 1860 and its properties are vested in a Board of Trustees called the Governing Body. The affairs of the Institute are managed by a Council containing representatives of the Trustees and of the Lok Sabha and nominees of the Central Government, including outside scientists.

The Institute is maintained from (i) income derived from the invested funds of the Institute, (ii) a recurring grant from the Central Government, and (iii) grants from research supporting organisations and industrial firms for specific, pure or applied, investigations.

Besides the main laboratories and workshops of the Institute situated at 93/1, Upper Circular Road, Calcutta-9, the Institute maintains two Experimental Stations at Falta and Shamnagar in 24-Parganas, and the Baccharaj Laboratory at Mayapuri, Acharya Jagadish Chandra Road, Darjeeling.

The research staff of the Institute consists of the Director, Heads of the Departments, Research Fellows, Research Assistants and Scholars. Research Assistants under grant-in-aid schemes are also appointed. Subject to limitations of accommodation facilities are given for research work to honorary workers. Investigations are being undertaken at present in the following subjects:—

I. PHYSICS.

Nuclear disintegration and fission ; Neutron production and artificial radio-activity ; Cosmic Rays ; Ultrasonics ; Bio-electric potentials ; Electrophoresis.

II. CHEMISTRY.

(a) Application of isotope tracers in biochemistry ; studies on radiation induced metabolic changes in animals.

(b) Isolation of active principles from medicinal and other plants including mimosa and study of their structures.

- (c) Paper chromatography and ionophoresis; electrochemistry of inorganic complexes; electrophoretic investigations with biological materials.
- (d) Enzyme chemistry.

III. BOTANY.

(A) *Plant Physiology.*

Growth and tropic and autonomous movements in plants; Transmission of excitations; Photosynthesis; Synthetic hormones as weed killers; Vernalization and Photoperiodism; Inorganic nutrients.

(B) *Plant Biochemistry.*

Particulate enzyme systems in higher plants; Physiology and biochemistry of crown gall tumour; Nucleic acids in blue-green algae; Physiology and biochemistry of gibberilin action; Application of tracer technique in phosphorus metabolism of higher plants.

(C) *Cytogenetics and Plant-breeding.*

Effect of chemicals and radiations in inducing polyploidy and chromosome alterations; Application of methods of selection; Hybridisation and artificially induced mutations in improving economic plants.

(D) *Anatomy.*

Anatomical studies of jute and other plants induced by X-radiations and radio isotopes; Studies on the physiological anatomy of Mimosa and other sensitive plants.

(E) *Paleobotany.*

Microfossils as an indicator of age of the Vindhya, Mandi salt and Salt Range.

IV. MICROBIOLOGY.

Soil micro-organisms; Purification and pilot plant production of antibiotics; biochemistry of micro-organism, U. V. and ionising radiation induced mutation of fungi and actinomycetes; application of counter-current technique in the separation and analysis of metabolic products of normal and mutant fungi.

V. ZOOLOGY.

Investigation on the metamorphosis of tadpoles. *Rana-tigrina* and *Bufo-melanostictus*, and its control by antibiotics and hormones.

The Institute publishes 'Transactions of the Bose Research Institute ; Annual Report ; Acharya Jagadish Chandra Memorial Lecture ;' etc.

Physics	— Director and Head of the Department : Dr. D. M. Bose, M.A., Ph.D., F.N.I.
Botany	— Head of the Department : Dr. K. T. Jacob, M.A., Ph.D.
Chemistry	— Head of the Department : Dr. P. K. Bose, D.Sc., F.N.I.
Microbiology	— Head of the Department : Dr. P. Nandi, M.Sc., Ph.D., D.I.C.

Registrar :

Sri A. K. Ghosh, M.Sc., F.G.S. (on leave).

Dr. S. K. Roy, M.Sc., Ph.D. (Lond.), D.I.C. (Acting).

The minimum qualification of a scholar is Master of Science.

The total number of research scholars and assistants on 31st March, 1957, was 58.

The total number of research guiding officers on the same date was 9.

Statement of Receipts for the financial year ending on 31st March, 1957 :—

(a) Non-Recurring :	
(Government of India)	Rs. 2,00,000- 0-0
(b) Recurring :	
(Govt. of India)	Rs. 4,00,000- 0-0
(Govt. of India for training in Scientific Research)	Rs. 12,666- 5-0
(Governing Body)	Rs. 45,564- 0-0
(c) Grants-in-aid schemes :	Rs. 1,74,971-15-3
(d) Other sources :	Rs. 1,855- 0-0
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Total :	Rs. 8,35,057- 4-3

The proportion of Government Grant to other sources is approximately in the ratio of 3 : 1.

Vacancies for all appointments are advertised in the newspapers on an all India basis and selection made on the recommendation of Selection Committees constituted according to the Regulation of the Institute.

Scholars are from time to time given study leave and grants to enable them to prosecute their studies abroad.

CENTRAL BUILDING RESEARCH INSTITUTE, ROORKEE

BRIEF HISTORY

The Central Building Research Institute is one of the National Laboratories established by the Council of Scientific & Industrial Research. Its history goes back to 1943, when the Council of Scientific & Industrial Research set up in December, a Building Research Committee with the late Sir Teja Singh Malik as Chairman, to help the organisation of building research in India. The Committee held its first meeting in December 1944, and recommended that a Central Building Research Institute should be established. A Building Research Unit was located at Roorkee with the support of the Govt. of Uttar Pradesh to work in close liaison with the Thomson College of Engineering (now the University of Roorkee). The Unit started functioning in May 1947, with a skeleton staff and had its location in a portion of the buildings of the aforesaid engineering college. It was shifted in May 1949 to two large hangers loaned to the Council by the University of Roorkee. The Foundation Stone of the new buildings was laid in 1951 and the Institute moved into its new buildings in April 1953.

The Capital grant for building and equipment is Rs. 29 lakhs. In addition the Institute is receiving equipment worth U.S. \$200,000 through the Technical Co-operation Mission and another similar grant has been made available.

The total annual recurring expenditure covering the establishment and renewal and replacement of equipment is at present approximately 8 lakhs rupees.

LOCATION

The Institute has been constructed on a site of 10 acres. An additional area of 57 acres has been acquired for further expansion and for residential accommodation of the staff.

STAFF

No. of Scientific Staff	57	23 gazetted. 34 non-gazetted.
No. of Auxiliary Staff	32	
No. of administrative and Ministerial staff including class IV staff.	98	37 Non-tech. & Ministerial staff. 61 class IV, Scientific and general.
Total	187	

DIRECTOR

During the formative stages of this Institute it had Dr. J. N. Mukherjee and Dr. K. Billig as its Directors. Since October 1955, the office is held by Lieut.-Gen. Sir H. Williams, retired Engineer-in-Chief, Army Headquarters, Government of India.

FUNCTION

The Institute is intended to carry out research on the different aspect of building construction and to disseminate information to the Government and the Industry to adopt newer techniques and methods. The work at the Institute has therefore been concentrated on short term research problems necessitated by the immediate need of the country as well as long range fundamental studies.

Research problems are suggested to the Institute by the Government, industry, engineers or the research workers. The suggested problems are examined in detail by the research workers and are finally approved by the Scientific Advisory Committee to constitute the research programme of the Institute.

In the selection of the research programme as well as the dissemination of results of research the Institute maintains a close liaison with the Ministry of Works, Housing & Supply and its special agencies particularly the National Buildings Organisation, various research Institutions in the country and the Planning Commission.

Besides carrying out the research programme the Institute advises government, industry, organisations and individuals who seek technical advice on problems of varying nature; which ranges from reference and bibliographic work routine information about machinery or equipment and technical help through correspondence or personal visits. The Institute is on various committees of the Government and institutions like the National Buildings Organisation and Indian Standards Institution and advises them on various technical matters.

Reviewing these functions in slightly greater detail it is evident that a number of the so-called traditional building materials are many a time used uneconomically in various parts of the building. A systematic study of these materials will lead to an ultimate economy in the cost of structure and a better utilization of the resources of the country in general.

The Institute undertakes research on building materials, on engineering and structural aspects of building and their foundations; on problems of comfort in buildings and their durability and speed of construction; in collaboration with government departments, institutions, industries employing labour on a large scale, and the building industry. Its activities naturally include basic research and funda-

mental studies coming within its purview such as X-ray studies and differential thermal analysis of clays and their electro-chemical and rheological properties strains and stresses in structures and comfort in buildings. In due course it expects to afford facilities for training of men for diverse types of construction and help creation of a body of trained men within the country and to carry out surveys and disseminate scientific and technical information through a well-organised information service. It will be helped in its work by an advisory committee representing different interests and by standing and ad hoc scientific and technical committees consisting of specialists in different subjects.

ORGANISATION

While many of the problems under investigation in India are similar to those in other countries, there are some which are of special interest to this country, such as, factors governing comfort and efficiency under tropical conditions, study of soil stabilization, use of indigenous material, utilization of industrial wastes, and construction of houses for persons of low income group on an extensive scale.

The research, is therefore, organised under groups of problems related to :—

- (i) Building Materials
- (ii) Design and Performance of Structures
- (iii) Soil Engineering
- (iv) Building Efficiency
- (v) Building Operations

Besides, it has auxiliary sections like the Workshop to carry out the repairs of the instruments and to fabricate new instruments and machines for the building industry.

The work of dissemination of information is being carried out by a separate division of the Institute which is responsible for the organisation of the Museum, Library and Publications of the Institute. It is also intended that this Section should carry out research on the actual dissemination of the information and the efficiency of organisation and developing surveys for the use of industry and the government.

The main difficulty in the promotion and development of work of this Institute has been the lack of sufficient engineers with a bent for research. Consequently the various posts in this Institute have remained unfulfilled over a long period. Progress of research has, therefore, necessarily been very slow and limited and only those problems have been taken up from time to time which were of urgent need and importance to the country.

RESEARCHES

Building Materials :

The work has been mainly concentrated on the efficiency of utilisation of raw materials being used by the industries at the moment, and on the development of the processes to replace the important materials. With regard to the efficiency of utilisation of raw materials, some of the common difficulties of the materials used at present were noted and modifications made with a view to immediate and long term economy. The work was also carried out with regard to the fabrication and setting up of research equipment for fundamental studies on physico-chemical characteristics of the building materials. The main problem on which work has been concentrated are :—

Limes and lime mortars where the Indian Specifications were compared with the specifications suggested by other countries and institutions, and our own recommendations made in the light of our experience and researches.

The acute shortage of the cement has created a situation where use of lime mortars offers itself as an alternative. Detail studies have, therefore, been carried out to test the compressive, tensile and transverse strength of mortars and on their physical properties, as well as shrinkage, volume change, plasticity and adhesion etc.

Gypsum Studies were aimed at utilising the impure gypsum, which is a hindrance to the mining of pure gypsum and is not utilised at present. On the basis of studies, setting properties and other related investigations were carried out and a new retarder was developed in the Institute which was found to be of some use.

Calcined clay (grog) was used and tried as substitute for the coal ash in the manufacture of bricks from black cotton soil and optimum conditions for the manufacture of good quality of bricks have been determined.

Lime blowing was studied in detail and preventive methods have been developed.

Specifications for non-erodable plasters of mud walls have been developed in the Institute and are being tried on medium scale to evaluate the results. The investigations at the laboratory revealed that silicon treatment of mud walls protects them from the monsoon, and offers itself as a very interesting solution, particularly as the silicon treatment is not very costly.

Apparatus for X-ray analysis of clays, for differential Thermal Analysis of building materials has also been set up, and a Geological Laboratory well equipped for petrological work has been established. Detailed programme of work on X-rays Differential Thermal Analysis and Petrological work, has been drawn out and is now being pursued.

Soil Engineering :

With the large scale building programme in the country, heavier and larger buildings are being constructed on different types of soils. Consequently, a proper appreciation of the various factors involved in the stability of foundations becomes necessary. The Institute has, therefore embarked upon a large scale testing programme for the safe bearing pressures of different soils in different situations. Simple laboratory and field tests are being developed for the purpose.

The second aspect of foundation engineering on which work has been concentrated is the design of foundations of black cotton soil. As a result of field observations on vertical ground movements, under-reamed piles going down to a depth of 12 feet for houses, in deep black cotton soil areas have been recommended.

Further studies in this sphere cover the field investigations on black cotton soil to discover the relationship between the liquidity index and shear strength plotted on same large scale and testing of the shear strength at site in an unconfined compression apparatus, the results are in fair agreement with the values obtained from laboratory curves. The sensitivity of black cotton soil was observed to be nearly unity.

The consolidation characteristics of black cotton soil in India reveal that they follow straight line relationship observed by Skempton. The tests of above soils have confirmed the straight line relationship between the bearing capacity and log liquidity index and, as well as, relationship between the liquid limit and compression index.

Laboratory and field investigations have been carried out on the bearing capacity on different types of soils. A portable loading truss and soil anchors were designed and fabricated in a local workshop. The truss was anchored to the soil and load was transferred to the column by a hydraulic jack with a pressure gauge. It is a simplification of the existing method of loading by sand bags.

The Institute has also developed a hand-operated Brick & Block Making Machine.

DESIGN AND PERFORMANCE OF STRUCTURES

The accent was on those programmes which would lead to sizeable savings in the use of critical materials, especially steel and cement, which are in short supply. Pre-stressed concrete offers promising possibilities in this direction and its wider adoption in India for bridge and building is, therefore, a development that requires to be stimulated. Being a new technique, the design and construction of pre-stressed structures, calls for specialised skill and knowledge. Engineers would go in for pre-stressed structures, on a large scale, only if they can freely turn to some organisation which can give them technical advice on their design and construction. This Institute is now fully equipped to fulfil this very useful function. Although the past years was a year of

preliminary preparations for handling such work, it was possible, in one instance, to render technical advice and assistance in the design and construction of a pre-stressed concrete bridge as recorded elsewhere in this report.

A 6 ft. wide foot-bridge made of pre-stressed concrete was designed for the Pathri Power House. The design recommended consisted of six pre-stressed I-beams 44' x 6" long for each span. Each beam was fabricated out of 9 blocks 4' x 4½" long and two end blocks 2 ft. long. The vertical mortar joints were ¾" wide and were packed by manual labour. The beam was recommended to be post-tensioned by using a Gifford-Udall Jack.

Further research arising out of the preliminary study carried out is being pursued, and is as follows:—

- (i) Comparison of the flexural ultimate strength and cracking load of monolithic beams and beams fabricated out of elements. Beams of both types will be of the same span, made of the same concrete and will be identically reinforced. They will be tested for their relative performance.
- (ii) Studies on the best proportions of mortar and the optimum water cement ratio.
- (iii) The relative merits of making the joints by manual tamping, vibration and injection.

A series of mixes are being studied with the aggregate-cement ratio, the water-cement ratio and the ratio of fine to coarse aggregate as the variables with a view to evolve systematic procedures for the design of high-strength mixes.

The pre-stressed joists for roofs are also being studied. This Institute has taken on hand a programme of developing a roof of pre-cast pre-stressed joists with hollow-tile or cinder hollow blocks used as filler blocks. Suitable design for various spans are under study. Work on the design and construction of an experimental pretensioning bed for casting these units is under way.

Preliminary experimental studies are being carried out on a roof suitable for use in tropical countries, designs consisting of cinder hollow blocks and R.C. T-beams of 12 ft. span spaced 21½ in. apart.

Preliminaries to the "Investigation of Reinforced Concrete Beams, reinforced with plain and twisted bars, and the applicability of the ultimate load theory to design" are on hand.

EFFICIENCY OF BUILDINGS

The work on the efficiency of building has mainly been concentrated on the Comfort Survey Studies. The final report of the Comfort Survey Project on the thermal behaviour of 45 experimental houses, at Delhi was submitted to the Comfort Survey Committee. In continuation of the above studies, the effect of ceiling height of build-

ings on indoor thermal comfort is being studied at Roorkee. Thermal conductivity of different insulating building materials have been completed.

The Comfort Survey comprised studies of 45 experimental houses at the International Low Cost-Housing Exhibition and detailed studies were carried out on :—

- (i) Inside and outside temperatures of walls and roofing materials.
- (ii) Effect of ventilation on indoor temperature.
- (iii) Illumination conditions during the extreme and mean positions of the sun during the months of December and June, and March and September.
- (iv) Design and orientation.
- (v) Moisture penetration.

The preliminary work on the ceiling height has been continued and work on short term projects at Delhi and Roorkee has been carried out and the data at the two places has been collected and is being analysed.

Theoretical acoustical analysis of the C.B.R.I. Auditorium was completed. Further experimental studies could not be undertaken for want of the necessary equipment.

INSTRUMENTATION

Sonic Testing of Building Materials :

A study of the correlation between the various conventional strength properties such as compressive and tensile strength, modulus of rupture, and static modulus of elasticity, determined by the sonic method was undertaken with a view to find out the efficacy of the sonic method as a measure for the estimation of the quality of the concrete in the laboratory. As the strength properties of the concrete have a bearing on such factors as age, mix-design, and water cement ratio, the influence of these factors on the dynamic modulus of elasticity and its correlation with the other properties, were also studied.

Ultrasonic Pulse Tester :

The construction of the ultrasonic pulse tester for field and laboratory testing of building materials and structures was completed. The instrument is suitable for detecting and determining the depth of the surface cracks and also locating the weak and strong zones of concrete in a structure. The instrument is designed to probe into the concretes of 4 to 5 feet thickness.

EXPERIMENTAL VILLAGE HOUSING

Based on the experience gained and data collected, an experimental village house has been constructed under the supervision and direction of this Institute by service men of the Bengal Engineering Group. The help of service men for the purpose of construction was

taken with a view to experiment with the idea of mutual aid teams and disseminate the new ideas through such teams in the villages.

TRAINING FACILITIES

This Institute does not admit students for any training. A few Junior and Senior Fellowships of Rs. 300/- and Rs. 500/- respectively, are offered to the selected candidates by the Council of Scientific and Industrial Research in the Investigations of the problems lying under the purview of this Institute.

Several lectures and courses are arranged for the benefit of Junior Engineers and Overseers. Recently the Cylindrical Shell Course organised by the National Buildings Organisation was inaugurated in this Institute under the Presidentship of Lieut.-Gen. Sir H. Williams, Director of this Institute. The scope of the lectures included the analysis, design and construction of cylindrical shells. It had been planned on the recommendation of the Plan Projects Committee to use shell roof construction for grain godowns. This type of construction had been suggested with a view to improve the economy and efficiency in building construction. The batch of students who attended this course included CPWD Engineers coming from New Delhi, Shillong, Poona, Srinagar and Madras, who would be shortly taking up the execution of grain godowns.

LIBRARY AND MUSEUM

The Institute is equipped with a library comprising the recent books on building materials, building design and construction, architectural physics, town planning etc.

The total number of volumes as on 30-11-1957 is as follows :—

Books and Pamphlets	..	5,025
Bound Periodicals	..	575
Reprints	..	374
Films	..	14
No. of Journals subscribed	..	268
No. of Journals in exchange or gratis	..	164

There is a museum of building materials and models etc. which is gradually maturing into a building centre.

BUDGET OF THE INSTITUTE

Pay of Officers	Rs. 1.06 lacs
Pay of Establishment	Rs. 1.43 lacs
Allowances	Rs. 1.19 lacs
Contingencies	Rs. 1.72 lacs
Maintenance	Rs. .11 lacs
Research Equipment	Rs. 1.07 lacs
Capital Expenditure	Rs. 1.38 lacs

Total	Rs. 7.96 lacs
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Revised estimates for 1957-58 for recurring expenditure is Rs. 10.155 lacs and for capital Rs. 2.005 lacs.

SOME OF THE IMPORTANT EXPERIMENTAL INVESTIGATIONS

I. *Materials.*

- (i) Improvements of bricks from black cotton soil.
- (ii) Possibility of making engineering bricks from alluvial soil ; X-ray, D.T.A. and Petrographic.
- (iii) Utilization of industrial wastes, such as iron blast furnace slag, pulverised coal ash.
- (iv) Weathering studies on sandstone.
- (v) Rheological and related studies on building paints and varnishes made in this country.
- (vi) Exploitation of indigenous minerals such as asbestos, Indian vermiculite, etc.
- (vii) Sonic and Ultrasonic methods of testing concrete.
- (viii) Mud Plasters.
- (ix) Building limes and brick masonry.

II. *Design and Construction Methods.*

- (i) Work on the development of prestressed concrete building units as may be applicable to Indian conditions.
- (ii) Development of indigenous pre-tensioning beds and simple screw jacks.
- (iii) Corrugated concrete flat roof.
- (iv) Studies of composite roofs of pre-cast pre-stressed joist or hollow cinder blocks.
- (v) Reinforced brick work.
- (vi) Development of new types of shell roofs.
- (vii) Bamboo reinforcement in concrete.

III. *Soil Engineering and Workshop.*

- (i) Fabrication of new machines and equipments.
- (ii) Laboratory studies on expansive clays with special reference to black cotton soils.
- (iii) Foundation studies on expansive clays with special reference to black cotton soil : setting up of field test sites.
- (iv) Soil surveys of local areas.

IV. *Orientation and Efficiency of Buildings.*

- (i) Studies on thermal behaviour of buildings.
- (ii) Acoustical studies of buildings, reverberation chambers and test room.
- (iii) Preparation of solar charts.
- (iv) Studies on Building materials.
- (v) Ventilation studies.

V. Projects.

- (i) Comfort Survey project on the 45 full scale houses of different types selected out of structures put up at the International Exhibition of Low-Cost Housing, New Delhi.
- (ii) Evolution of models of village-houses, based on research carried out.

VI. Survey & Information.

- (i) Relation of large scale experiments to laboratory scale experiments.
- (ii) Studies in the organisation of information services.

PUBLICATIONS

The publications of the Institute are generally issued in the form of research articles contributed in the technical journals of repute. About eighty-five papers have been published upto the end of 1957.

Besides the Institute also publishes bulletins from time to time.

The list of up-to-date publications and bulletins are herewith attached.

ACCOMPLISHMENTS OF C. B. R. I. DURING 1956-57

1. (i) *Bricks from Sticky Soil*: Calcined clay can be used as a porous opening material with an advantage over coal ash in manufacture of bricks from highly plastic and expansive black cotton soil. Deterioration of bricks due to presence of lime can be prevented by the addition of salts, coal ash and immersing the bricks in cold water soon after firing them.

(ii) *Mud Plaster*: The following treatments were developed and are suitable for mud plasters:

- (a) Cut back prepared from 80/100 penetration bitumen diluted with 20% kerosene oil and mixed with a little wax.
- (b) A slurry containing 12 parts cement, 1 part lime, 5 parts sand prepared in 10% soap solution.

(iii) *Silicone treatment of Mud walls*: A water solution of silicone when applied over the surface protects the mud plaster and kaccha walls from the effects of rain.

(iv) A suitable *Foaming Agent* from indigenous raw materials has been developed. The process has been handed over to the Hindustan Housing Factory who are now exploiting it.

2. (i) *Foundations on Black Cotton Soil*: Work has been done on the design of foundations on black cotton soil. A house built on underreamed pile at Powerkhara near Itarsi has shown no sign of cracking for about two years.

(ii) *Brick and Block Making Machine*: A hand operated brick and block making machine has been developed. The output per man-hour is about 62 i.e., about 2,000 bricks per day. It costs about Rs. 500. N. R. D. C. has now taken up the scheme to exploit it on large scale and to supply it to interested parties.

3. (i) *Pre-stressed Concrete Bridge*: At the request of Pathari Power House, a foot bridge of pre-stressed concrete beams, fabricated out of pre-cast elements, has been constructed. The beams were to be post-tensioned by using Gifford-Udall Jack.

(ii) *A Pre-tensioning Bed* for casting pre-stressed members for span 20' has been developed. This has been made in local workshop.

(iii) *Doubly-Curved Shell Roofs*: To exploit the potentialities offered by doubly curved shells for low-cost housing, the doubly curved shell (developed by this Institute) roof constructed has been suggested to Slum-Clearance Committee, Planning Commission, New Delhi. At their request large scale experiment has been undertaken.

4. (i) An apparatus for determining *Thermal Conductivity* of building materials has been set up.

(ii) An *Ultra-Sonic Pulse Tester* for detecting and determining surface cracks has been fabricated.

(iii) A first class *climatological observatory* is being maintained in this Institute. Enquiries from different places are being attended. It is proposed to send regularly the data to the Indian Meteorological Department.

(iv) *Comfort Survey Studies* on 45 houses at Delhi were carried out and report has been submitted to the Comfort Survey Committee. Ceiling height studies have also been carried out on short term project.

5. (i) *Experimental Village House* and model school have been constructed including certain new features in technique of construction under the supervision and direction of this Institute.

CENTRAL DRUG RESEARCH INSTITUTE

DIRECTOR

Dr. B. Mukerji, D.Sc., M.B. (Hons.), M.P.S., M.S.Ph.S.,
F.A.A.S., F.A.Ph.S., F.I.C., F.N.I.

DIVISION OF BOTANY AND PHARMACOGNOSY

A: Staff:

Mr. S. L. Nayar: Senior Scientific Officer,
Dr. C. L. Madan: Joined as Junior Scientific Officer and
Dr. B. S. Bishat: Joined as Senior Scientific Assistant.

B. Progress of Work:

- (i) A Glossary of Indian Medicinal Plants giving synonyms, habitats and uses of indigenous medicinal plants has been published by the Council of Scientific & Industrial Research.
- (ii) Compilation of a handbook of indigenous drugs of India, is in progress.
- (iii) Experimental propagation and culture of *R. serpentina* by seeds have been undertaken. The plants have been found to thrive much better in a shady area with less casualties than the ones growing in sunlight. The heavier seeds, as determined by floating experiments, give a much higher percentage of germination.
- (iv) Specimens of about 58 species of medicinal plants have been collected locally and added on to the herbarium.
- (v) Pharmacognostic studies of *Coccinia indica*, a drug reputed to be efficacious in diabetes, have been undertaken.

DIVISION OF MEDICINAL CHEMISTRY

A: Staff: (Changes only indicated)

Dr. M. M. Dhar and Dr. N. M. Khanna have been promoted as Senior Scientific Officers. Drs. R. N. Iyer, R. P. Rastogi, Mr. Bhatta-charji have been promoted as Junior Scientific Officers. Dr. P. R. Bhandari has been promoted as Personal Assistant (Tech.) to Director and Dr. M. C. Khosla as Senior Scientific Assistant. Dr. G. N. Vyas has resigned to take up the post of Junior Scientific Officer in M/s. Hindustan Antibiotics Ltd., Pimpri, Poona.

B: Progress of Work:

(a) *Phytochemistry*: A number of active principles have been isolated from *Pauvolfia* species, *Melodinus monogymus*, *Rivea cuneata*,

Caesalpinia digyna, Cassia absus, Picrorhiza Kurrooa, Aegle marmelos, Citrus peel, Nardostachys jatamanshi, cyclea burmanii, and their pharmacological testings are in progress. Extract of Coccinia indica has shown promising evidences of its utility in diabetes. Comparative studies of Reserpine and total alkaloids of Rauwolfia have shown that 'Reserpine' alone is not responsible for the total activity of the drug. The observations made so far indicate that the extract of the seed of Mille-tia pachycarpa is a potent contact insecticide.

(b) *Synthetic Chemistry*: Two compounds belonging to the group of sulfones have shown promising evidences of combating leprosy. A few others have indicated their usefulness in tuberculosis of guineapigs.

DIVISION OF BIOCHEMISTRY & IMMUNOCHEMISTRY

A: *Staff*: (Changes only indicated)

Dr. D. L. Shrivastava has been promoted as Deputy Director. Dr. A. T. Dudani has resigned to take up the post of Assistant Director, Central Research Institute, Kasauli. Dr. V. C. Vora, has been promoted as Senior Scientific Officer, Dr. V. K. Mohan Rao, M/s. S. N. Ghatak, K. L. Arora as Junior Scientific Officer and Mr. Chanan Singh as Senior Scientific Assistant. Mr. Prem Sagar has joined as Junior Scientific Assistant.

B. *Progress of Work*:

Enzyme make-up of pathogens: Studies with particular reference to M.tuberculosis, S.typhosa, V.cholerae and P.pestic have been undertaken.

Pharmaceutical preparations: Isolation or production.

(a) *Vitamin B₁₂ production*: More laboratory trials have been carried out to find suitable condition for the production of this important vitamin from soil organisms.

(b) *Vitamin B₂*: Fermentation studies with a view to develop a suitable medium are in progress. Studies are being made on the use of molasses. Rice bran extract has been found to support the growth of yeasts.

An adsorbant clay has been prepared from local mitti (Chikni mitti) for the isolation of riboflavin from the fermented liquor.

(c) *Utilization of rice bran for Vitamin concentrate*: *Preparation of*: An oil rich in tocopherols has been obtained from brans. The aqueous extracts give concentrate of B Complex factors and the bran residue yields phytin by acid extraction.

Antibiotics:

An antibiotic X 340 active against a large variety of micro-organisms has been isolated from an unidentified streptomyces species.

Electrophoretic studies:

The modern technique of paper electrophoresis is being employed for finding out changes in the blood constituents during the onset of disease. The method has given valuable results in understanding the progress of tuberculosis and anaemia in experimental animals and also as a means of diagnosing trachoma in human beings. Interesting Electrophoretic patterns have been observed in guineapigs treated with sulfones synthesised in this Institute.

DIVISION OF MICROBIOLOGY & PARASITOLOGY

A: *Staff:* (Changes only indicated)

Dr. B. N. Singh has joined as Assistant Director. Dr. A. Mukherji has returned from West Germany and resumed duty as Senior Scientific Officer. Dr. K. Bhaskaran has been promoted as Senior Scientific Officer. Drs. S. K. Gupta and O. P. Babar have been promoted as Junior Scientific Officer and Senior Scientific Assistant respectively. Mr. O. P. Srivastava has joined as Senior Scientific Assistant and Dr. (Miss) S. Mathew has been promoted as Senior Scientific Assistant.

B: *Progress of Work:*

(a) *Chemotherapy of T.B.:* p-isopropyl amino p'-amino diphenyl sulphone (T205) shows an activity comparable to D.H.S., INH & D.D.S. A copper chelate of SN322 (p-amino p'-hydrazido methyl amino) diphenyl sulphone was found to be as effective as INH & DHS in guinea pigs.

(b) Juinaldine derivatives and alkylamines have been found to be more active than quinolines and corresponding alkylamino alkylamines respectively.

(c) *Aerobacter* sp. (Strain 1912) has been found to produce in the medium an excystment thermolabile factor with a low molecular weight principle capable of diffusing easily through cellophane membrane and the agar gel. Study of aminoacids and other substances isolated from bacterial cells on excystment is being continued.

(d) A copper chelate of sulphone, two sulfoxides and three sulphides completely inhibited the growth of *Trichophyton rubrum* at 1.0% concentration. None of the sulphides were found to be fungicidal.

(e) Broth cultures of *V.cholerae* are rapidly lysed by thymol. Such lysates obtained from lysogenic strains do not reveal any appreciable increase in free phage particles.

DIVISION OF PHARMACOLOGY & CHEMOTHERAPY

A: *Staff:* (Changes only indicated)

Dr. S. N. Pradhan has left for U.S.A. as a Project Associate and Dr. Raja Rama Rao has resigned to take up the post of Lecturer in

Pharmacology, Dept. of Chemical Technology, Bombay. Dr. T. D. Mukerjee has joined as Senior Scientific Officer. Dr. J. D. Kohli has been promoted as Senior Scientific Officer. Drs. I. M. Chak, J. N. Karkun, have joined as Junior Scientific Officers, Drs. R. N. Sur, K. S. Varadan, A. C. Roy have been promoted as Junior Scientific Officers and Dr. S. N. Roy and Mr. Ram Govind have joined as Senior Scientific Assistant and Junior Scientific Assistant respectively.

B: Progress of Work:

(a) Pharmacological investigations on the active principles isolated from medicinal plants and synthetic neuromuscular blocking agents, antimycobacterial agents are in progress.

(b) Endocrinal studies like (i) androgen therapy in experimental hypothyroidism (ii) influence of melanophore hormone on the pattern of depletion of adrenal ascorbic acid in hypophysectomised rats etc. have also been taken up.

(c) *Oral contraceptives*: 19 nortestosterone has been observed to delay conception in rats by deferring ovulation beyond the normal time. Some indigenous drugs are also being screened in this field.

DIVISION OF EXPERIMENTAL MEDICINE

A: Staff: (Changes only indicated)

Dr. S. H. Zaidi and Dr. S. K. Mukherjee have joined as Assistant Director and Senior Scientific Officer, respectively. Dr. R. N. Chakravarti has been promoted as Senior Scientific Officer and Mr. U. N. De as Junior Scientific Officer. Dr. G. B. Singh has joined as Junior Scientific Officer.

B: Progress of Work:

(a) Combination therapy of desiccated thyroid and insulin has been found to regress alloxan diabetes. BZ55 and D860 (delay sulfanilamides) have been found to be fairly potent in elderly diabetics.

(b) Clinical trials of psoralin and isopsoralin have shown encouraging response in Leucoderma.

(c) Desiccated thyroid and oestrogen bring about partial regression of aortic atheroma and complete regression of coronary atherosclerosis but fail to regress coronary disease.

(d) Studies in peptic ulcers show that capsicum promotes mucous secretion and reduces free acidity.

ANALYTICAL WING

A: Staff:

Dr. G. K. Ray has been promoted as Senior Scientific Officer and Mr. S. K. Srivastava as Senior Scientific Assistant. Dr. P. C. Bose, M/s L. V. Kannan and S. S. Iyer have joined as Junior Scientific Assistants.

B: *Progress of Work:*

13 samples received from Pharmaceutical firms, private agencies and individuals have been analysed. A large number of samples received from Government agencies, University Institutions, and National Laboratories have been analysed and assayed.

STATISTICS SECTION**A: *Staff:***

Mr. P. A. George and Mr. N. Sen joined as Statistician and Senior Scientific Assistant, respectively.

B: *Progress of Work:*

(a) Testing for differences between 'treated' and 'control' groups of animals with reference to some 'measurable' characters.

(b) Testing for differences in counts e.g., bacterial cells, blood cells etc.,

(c) Analysis of bioassays, involving various dosages of drugs with different groups of test animals and

(d) Improvements in the statistical designing of experiments are being undertaken.

LIBRARY**A: *Staff:***

Mr. T. P. Sinha is working as Senior Librarian and Mr. V. N. Misra has joined as Junior Librarian.

B: *Progress of Work:*

Total number of books and journals are 2,765 and 251 respectively.

BIOPHYSICS DIVISION**A: *Staff:***

Mr. K. R. K. Rao joined as Senior Scientific Assistant.

B: *Progress of Work:*

Investigation on Makaradhwaj, an Ayurvedic preparation, is in progress.

INFORMATION SECTION**A: *Staff:***

Dr. T. H. Shama Rau—Information Officer.

B: *Progress of Work:*

In addition to disseminating information (technical and non-technical), writing popular articles etc., this section has dealt 691 enquiries pertaining to the specialised fields of this Institute.

ADDITIONAL INFORMATION

Dr. S. K. Mukherjee and Dr. C. R. Krishnamurti, have proceeded to Canada and London for advanced training under the Colombo Plan in the field of Diabetes and Enzymology respectively. Mr. B. S. Sinha and Mr. Ramji Mal have joined as Administrative and Accounts Officers, respectively. M/s K. L. Vij and J. Sahai have been promoted as Section Officers.

Drs. S. K. Mukherjee, S. K. Gupta and Mr. J. N. Karkun have been admitted to the D.Phil. degree of Calcutta University and Mr. M. C. Khosla to Ph.D. degree of the Punjab University. Mr. K. S. Varadan has been admitted to Dr. rer.nat and Mr. P. R. Bhandari to Dr. Phil.nat of Bonn and Mainz Universities of Germany respectively. Dr. K. Bhaskaran has been admitted to Ph.D. degree of London University.

Subjects in which facilities for post-graduate and research work exist :

There is no regular teaching programme in this Institute but post-graduate level scholars are taken for specialised training in research methods. Facilities for such studies exist in Pharmacology, Biochemistry, Medicinal Chemistry, Microbiology, and Experimental Medicine.

FELLOWSHIP AND SCHOLARSHIPS

Dr. Jagdish Misra and Mr. S. Rakshit have been awarded the Senior and Mr. L. G. Subrahmanian, a Junior Fellowship of the Council of Scientific and Industrial Research.

FINANCIAL STATEMENT

(a) Building—Chattar Manzil	Donated by	Estimated value
Palace, Lucknow	U.P. Govt.	Rs. 13,50,000 (land),
(9 acres)		Rs. 25,00,000 (bldgs).
(b) Grant :		

CAPITAL

For development plans	.. Rs. 36,610 lakhs.
Committed recurring expenditure	.. Rs. 73.36 lakhs.
Provision for 1956-57 about Rs. 16 lakhs.	

THE CENTRAL ELECTROCHEMICAL RESEARCH INSTITUTE, KARAUKUDI

The Central Electrochemical Research Institute, Karaikudi is one of the National Laboratories established by the Council of Scientific & Industrial Research with the dual purpose of promoting scientific endeavour in the country and aiding in the industrial and technological development of the country. The Council had recognized the need for a separate institute for electrochemical research from the very beginning, in consideration of the rapid developments taking place in the generation of hydro-electric power on a country-wide basis and at localities within easy reach of the raw materials needed for the chemical industry. The proposal for an electrochemical research institute took concrete shape when the late Dr. Rm. Alagappa Chettiar gifted a sum of Rs. 15 lakhs and 300 acres of land to the Council for founding the Institute. Initial difficulties in ensuring an adequate water supply were soon overcome and the Institute was formally declared open by the Vice-President of India, Dr. S. Radhakrishnan on the 14th January, 1953.

The institute started active research very soon after its opening, when Dr. B. B. Dey joined as its first Director. The research programme was formulated in relation to the needs of existing electro-chemical industries in the country and new ones which were expected to come up shortly as a result of the development programmes of the First Five Year Plan. Emphasis was placed on applied research on direct utility to the industry and only such problems of fundamental research were taken up as emerged in the course of the work on applied problems.

Among the research problems which were taken up early in 1953, special mention may be made of the utilization of Neivelli lignite for the electric furnace production of calcium carbide, the production of electrolytic manganese from low grade ores, electrolytic production of titanium metal, the electrolytic recovery of pure lead and antimony from battery wastes, development of processes for the electrolytic production of technically important inorganic and organic compounds, particularly cuprous oxide for use in anti-fouling paints, battery grade manganese dioxide from low grade ores, caustic soda and sulphuric acid from sodium sulphate for direct re-use in the rayon industry, ammonium perchlorate for use in the production of hydrogen peroxide, potassium chlorate, calcium gluconate, aminophenols by the direct reduction of nitro-compounds and salicylaldehyde from salicylic acid, the hard chromium plating of bearing surfaces, particularly piston and piston valve

rings of locomotive and Internal Combustion Engines, anodization and finishing of aluminium for different decorative and other purposes, electro-deposition of brass, and the fabrication of new types of primary wet cells

Research projects of importance which were taken up in subsequent years include studies on the production of improved types of lead-acid batteries, the electro-winning of zinc from Zawar ore concentrates, electro-deposition of cobalt-tungsten alloys from aqueous solution, alloy gold plating, hard chromium plating of different types of engineering parts, including injector delivery ram cones, textile machinery parts, callendria tubes of sugar evaporators, machine tools, etc., the production of nickel-cadmium accumulators, polarographic analysis of impurities in metals, the production of hydrazine by electric discharge methods and the electrolytic preparation of perchlorates, hydrosulphite, basic aluminium salts for use as special tanning agents, etc. Side by side with these, *ad hoc* problems suggested by the industry, such as the purification of zinc chloride liquor by electro-chemical oxidation of the iron impurity, the malleabilization of cast-iron, stop-off materials for use in gold-plating, etc., were also investigated.

One of the important contributions of the Institute has been the development of the rotating electrode technique in preparative electro-chemistry. The use of the rotating electrode has been found advantageous in such diverse processes as the production of cuprous oxide, calcium gluconate, p-aminophenol, and salicylaldehyde. The application of this technique enables the use of much higher current densities than is possible at stationary electrodes and correspondingly increases the production capacity of a cell of given size. Another important advantage of the technique is that the electrode reaction can be kept under much better control, and the conditions readily adjusted to obtain any one of a number of possible products. Fundamental studies on the kinetics of reactions at rotating electrodes have also been carried out and have yielded interesting information on the changes in reaction mechanism brought about by rotation of the electrode.

The Institute has completed the work on a number of problems mentioned above, and several other processes have been brought to a stage when they could be handed over to industry on the basis of further pilot plant trial. The processes developed for the production of cuprous oxide, calcium gluconate, p-aminophenol and diaminophenol, salicylaldehyde, perchlorate and the production of basic aluminium salts anodizing, dyeing, multi-colouring, printing and photographic reproductions on aluminium, the new primary wet cell evolved as a cheaper substitute for Leclanche type sac, dry and inert cells, are all ready for industrial utilization and necessary action is being taken towards their commercial development. The processes developed for the electrolysis of sodium sulphate for obtaining rayon-grade caustic soda and sulphuric acid, the

electrolytic recovery of lead and antimony from battery wastes, the production of electrolytic manganese using the chloride bath, and the preparation of battery grade manganese dioxide from low grade ores have been successfully tested in large laboratory scale operation and would be released to the industry after larger scale trials to study the economic aspects.

The research programme of the Institute has recently been reviewed in the light of the development schemes included in the Second Five Year Plan, the following being some of the important projects which have been taken up in 1956-57 :

- (1) Electrochemical production of lead from Zawar ore concentrates.
- (2) Electrolytic oxidation of toluene to benzaldehyde.
- (3) Preparation of cupric hydroxide and copper powder for use in anti-fouling paints.
- (4) Development of improved types of dry cells.
- (5) Electrochemical studies on protection conferred by different metal finishing treatments.
- (6) Corrosion of metals and metallic couples under tropical conditions.
- (7) Preparation of lead peroxide electrodes for use in place of platinum.
- (8) Kinetic of electrode processes :
 - (i) Anodic behaviour of metals.
 - (ii) Reactions at rotating electrodes.
 - (iii) Studies on the redoxokinetic effect.
 - (iv) A. C. polarography.

Professor K. S. G. Doss took over charge of the Institute on the retirement of Dr. B. B. Dey in January, 1957. The scientific staff now consists of 40 workers, with Dr. A. Jogarao and Dr. H. V. K. Udupa as Assistant Directors, 4 Senior Scientific Officers and 6 Junior Scientific Officers. The Institute has so far published 31 papers and taken out or filed 20 patents.

CENTRAL FOOD TECHNOLOGICAL RESEARCH INSTITUTE, MYSORE

PROSPECTUS OF THE POST-GRADUATE ASSOCIATESHIP COURSE IN FRUIT TECHNOLOGY (Assoc. C.F.T.R.I.)

The Central Food Technological Research Institute was started in October, 1950. The activities of the Institute are mainly directed towards fundamental and Applied research in different branches of Food such as Preservation of fruit and vegetable products, Food Processing, Food Engineering, Cold Storage and Preservation, Biochemistry, Dietetics and Microbiology and Sanitation, etc.

This Institute also renders advice and guidance to the Fruit and Vegetable Preservation Industry through correspondence or personal visits by the staff, if necessary, and by issuing technical as well as semi-technical literature in the form of leaflets or bulletins with the latest methods of preparing various products.

Facilities for imparting training both in theory and practice in fruit and vegetable preservation are also provided with a view to qualify students as teachers, demonstrators, or technical experts for employment in Fruit and Vegetable Preservation Factory. Teaching facilities are provided mainly by the Fruit Technology Division of the Institute. Besides, fundamental and applied research is conducted and it is also running Fruit Products Order Laboratory financed by the Ministry of Food and Agriculture, Government of India, for analysing fruit and vegetable products manufactured in the country and imported from abroad.

There is a good scope for the trainees in Fruit Technology to be absorbed in the Industry and Central and State Governments.

Facilities are provided for the following Courses of studies :

1. Two years' Post-Graduate Training in Fruit Technology,
2. Refresher Course of one month's duration for the Industry.

TWO YEARS' POST-GRADUATE COURSE LEADING TO FRUIT TECHNOLOGY ASSOCIATESHIP OF THIS INSTITUTE

(Assoc. C.F.T.R.I.)

Duration of the course: The course is for a period of two years starting from 1st August every year including 3 months' practical training in a recognised Fruit Preservation Factory and is designated as Assoc. C.F.T.R.I.

Qualifications for Admission: Minimum qualification for admission is a high class Degree with Chemistry or in Agriculture with Chemistry as major subject. Preference will be given to M.Sc.s. and Honours Graduates who have studied Biochemistry and specialised in Chemistry of Foods.

Admission: Application for admission should be made in the prescribed form and must reach the Administrative Officer, Central Food Technological Research Institute, Mysore, complete in every respect, before 1st July. Application forms which are incomplete in any respect will not be considered. The students may be called for interview before admission, if considered necessary.

Number of students: Ordinarily 6 students are admitted but under exceptional circumstances, the Director of the Institute may at his discretion admit 8 students if facilities permit.

Tuition Fees: A fee of Rs. 15 per month is charged from each student. The fees will be payable quarterly in advance.

Besides the above, each student will be required to deposit on admission to the course a security of Rs. 50 which will be refunded on the satisfactory completion of the course after deducting outstanding dues, if any.

In the case of students who are unable to complete their studies, the security will be refunded earlier after deducting outstanding dues, if any.

Age: The maximum age limit for admission to the course is 25 years and minimum is 21, but the Director may waive the limit in individual cases if there are special circumstances to justify such relaxation.

Hostel: Hostel accommodation exists at the Institute. A fee of Rs. 10 per month is charged per room. Students accommodated in double seater rooms will be required to pay Rs. 5 p.m. each, payable quarterly in advance.

Details of the course: The course will consist of two parts.

1. The first part, extending over a period of one year (I Year), will consist of a course of lectures and practicals.
2. The second part, extending over a period of one year (II Year), will consist of:
 - (a) Training in research methods and writing up a report on the investigation done and review of the existing literature. A definite problem will be set for each student.
 - (b) Three months' factory training in a recognised Fruit and Vegetable Preservation Factory.
3. The syllabus of studies for the course is given below.

Terms: (i) Each academic year is divided into the following terms :

First term : 1st August to 30th November (both days inclusive).

Second term : 15th December to 31st March (both days inclusive).

Third term : 15th April to 31st July (both days inclusive).

(ii) Classes will remain closed for vacation from 1st December to 14th December and from 1st April to 14th April.

Attendance: (i) All students are required to have a minimum of 75 per cent attendance in the total number of lectures, practicals and Factory training separately.

(ii) Students may be granted leave for sufficient reasons during the term for periods not exceeding five days at a time, upto the maximum of 2 months during the entire course of training. Only in exceptional circumstances a total absence of 3 months may be condoned.

Educational Tours: Tours will be arranged for visiting important Fruit Preservation Factories in India. The students (other than Government nominees) will be entitled to single Third Class fare only for these tours—all other expenses being borne by the students themselves. The Government nominees may draw Travelling Allowance for the tours undertaken by them from the respective State Governments as admissible under the rules.

Stipends: No stipends are given by the Institute to the students undergoing the course. However, scholarships are sometimes offered by the State Governments and leading Fruit Preservation Factories in India. The scholarships thus offered are given to the deserving students on the basis of their results in the First Year examination or according to the conditions of the scholarship offered.

Employment: Although the Institute does not guarantee any employment to the students, every effort will be made to get employment to those who successfully complete the course.

Examinations :

(a) There will be terminal examinations at the end of the First and the Second terms for the first year students.

(b) At the end of the first year an annual examination will be held beginning from 15th July covering the full syllabus.

Details of these examinations are given as under:—

FIRST TERMINAL EXAMINATION :

One paper in the portion taught	..	3 hours	100 marks
Practical and viva voce	..	4 hours	50 marks
Total	..		<u>150 marks</u>

SECOND TERMINAL EXAMINATION :

Paper A (On the portion taught)	..	3 hours	100 marks
Paper B (On the portion taught)	..	3 hours	100 marks
Practical and viva voce	..	3 hours	100 marks
Total			300 marks

ANNUAL EXAMINATION :

Paper A	..	3 hours	100 marks
Paper B	..	3 hours	100 marks
Paper C	..	3 hours	100 marks
Practical and	..	5 hours	150 marks
Viva voce			50 marks
Total			500 marks

The paper shall be on the following subjects :

PAPER A : General principles of fruit preservation, Canning and bottling of fruits and vegetables, Spoilage of canned fruits and vegetables, General layout of factories, Equipment, Scope of various products etc. etc.

PAPER B : Jams, Jellies and marmalades, Butters, Preserves, and Canned fruits, Sun-drying and dehydration of fruits and vegetables.

PAPER C : Fruit juices and squashes, Vinegar, Sauces, Ketchup and Pickles, by-products from fruit and vegetable wastes in a factory.

PRACTICAL PAPER : Preparation, Analysis of fruit and vegetable products and chemical control of manufacturing processes.

(a) The minimum number of marks required to pass the First year examination shall be 40 per cent in each of the papers in the written examinations as well as in the practical examination. If a candidate fails in one paper in the first attempt, but has obtained an aggregate of 50 per cent and not less than 35 per cent marks in the paper in which he has failed, he will be considered as having passed.

(b) Unsuccessful candidates in the first year may be allowed to reappear in the Supplementary examination to be held in November every year in the particular paper/papers in which they fail. In such subsequent attempts the minimum pass marks will be 40 per cent of each paper/papers in which the candidate appears. The total number of attempts allowed in a paper/papers is limited to three only. The candidates declared successful on the result of supplementary will be awarded only pass class.

II YEAR EXAMINATION :

(i) Students of the second year class will be required to complete and submit a report of investigation on or before 15th July. Reports not received by that date may be held over to the next session for consideration.

(ii) Each report should be submitted in triplicate with three sets of illustrations or diagrams, if any.

(iii) Two hundred and fifty marks will be assigned to the report and 100 marks for the oral examination.

(iv) Minimum pass marks for the report and oral examination will be 40% in each case.

Award of Assoc. C.F.T.R.I. Before the end of each session, the students will be examined in theory and practice by both internal and external examiners appointed by the Director of the Institute and will be awarded a Assoc. C.F.T.R.I. on (i) their being declared successful in the examination and (ii) on receipt of a satisfactory report from the factory concerned on their successful completion of 3 months' factory training.

The Associateship of the Institute (Assoc. C.F.T.R.I.) will be awarded on the combined result of the examination held at the end of both the years. While compiling the result, total marks secured by the student in the first year annual examination would be taken into consideration.

In order to be eligible for the Associateship, students must obtain at least 40 per cent marks in the aggregate.

The successful students will be classified as follows :

- (i) Those who obtain 60% or above in the aggregate—Certificate of merit.
- (ii) Those who obtain 50% or above but less than 60% in aggregate—Distinction.
- (iii) Those who obtain 40% and above but less than 50% in aggregate—Pass.

Assoc. C.F.T.R.I. is open to the old students who have obtained Diploma in Fruit Technology either [i] from the Former Indian Institute of Fruit Technology at Lyallpur or at Delhi or [ii] from the Central Food Technological Research Institute, Mysore, provided they attend the classes for another nine months in this Institute and work on a particular problem and submit their report as in the case of II year students. If declared successful as per rules for the II year class, they will be entitled to the award of Assoc. C.F.T.R.I.

REFRESHER COURSES IN FRUIT & VEGETABLE PRESERVATION

Besides the regular post-graduate course of training mentioned above, facilities are also offered for refresher course of one month duration twice during the year for the representatives of Fruit and Vegetable Preservation Factories in the country. The fees for such course is Rs. 25/- p.m. Accommodation will be provided in the hostel, if available, at the usual rates according to the type of accommodation.

SYLLABUS

THEORY

Some preliminary observations :

(i) Fruit and Vegetable Preservation Industry in India— its present status—imports of canned fruits and other fruits and vegetable products in India—necessity of developing this industry at present—raw material available in different parts of the country and their suitability for canning or manufacture of products—products for which there is scope in India—some impediments in the developments of fruit and vegetable preservation industry in India.

(ii) General principles of fruit and vegetable preservation—preservation by heat, chemicals, sugar, salt, fermentation, drying, etc.

(iii) Microbiology as applied to preserved foods—classification of yeast, mould and bacteria—principle of spoilage and control of micro-organisms—types of spoilage—examination of spoiled cans and raw materials—food poisoning.

Canning and bottling of fruits and vegetables :

(iv) Brief history of scientific canning.

(v) Canning in tin and glass containers—necessity of development of tin and glass containers industry in India.

(vi) Home canning equipment.

(vii) Canning equipment for commercial production.

(viii) Important considerations for laying out a cannery—plant sanitation—rodent and insect control—water supply, sewage and industrial waste, cleaning, use of detergents—inspection technique.

(ix) Methods employed in canning, wasting, grading, blanching, lyepeeling, filling, exhausting and processing.

(x) Preparation of syrups and brine for canning.

(xi) Canning of fruits commonly grown in India—Mangoes, litchies, pineapple, guavas, musk melon (Sarda), apricots, peaches, plums, pears, figs, straw berries, raspberries, grape-fruit, grapes, etc.

(xii) Canning of some important winter and summer vegetables, peas, green gram, spinach, tomatoes, okra, carrots, cabbage, pumpkin, cauliflowers, flowers, asparagus, etc.

(xiii) *Spoilage in canned fruits and vegetables*: Corrosion hydrogen swells—fermentation—pigments, carotenoid, flavone discolouration—non-poisonous gas formation, etc.

Fruit and vegetable juices:

(xiv) Unfermented beverages (sweetened and unsweetened) methods of juice extraction—home and commercial scale equipment for juices, squashes and cordial—clarification of fruit juices—methods of preservation—plant lay-out.

(xv) Preparation and preservation of juices, squashes and cordials from citrus fruits, viz. *Malta oranges, sangtra, galgal, lime, lemon and grape fruit, mango, phalsa, jaman, grape, mulberry, passion fruit, apple, pomegranate, plum, cashew-apple, tomato, carrot, etc.*

(xvi) *Fruit juice concentrates*: General methods of preparation of orange, lemon, lime juice and other fruit juice concentrates.

(xvii) *Fermented beverages*: General principles of fermentation, etc. Apple Cider and wines from grapes.

(xviii) *Jams, jellies and marmalades*: Role of pectin, sugar and acid in jelly formation—general methods of preparation of jams and jellies—use of jelmeter etc. Home equipment—equipment for commercial production.

(xix) *Recipes for the manufacture of jams, jellies and marmalades*: Plum jam, cashew apple jam, apricot jam, peach jam, pear jam, mulberry jam, raspberry jam, strawberry jam, guava jelly, lemon jelly etc. Citrus marmalades from fruits like *malta, Khatta, (citrus aurantium), Sangtra and Galgal (Citrus Limania)*.

(xx) *Pickle, sauces, chutneys and vinegar*: Vinegar pickles general methods of preparation equipment, washing—salting steeping in priming vinegar—bottling sweet and acid pickles—distilled white vinegar—pickling of some important Indian vegetables like cauliflower, onions, red pepper, cucumber, olives, green tomatoes, long gourd (*tar*), etc.

(xxi) *Recipes for the preparation of sauces, ketchups and chutneys*: Tomato ketchup—mango chutneys—green mango pickles—pickled water melon rind—lime and lemon pickles—chilli sauce—other important sauces like Worcestershire Sauce.

(xxii) *Vinegar making*: Definitions—general methods of the preparation of vinegar—alcoholic fermentation—acetic fermentation (slow and quick generator method)—control of temperatures—ageing of vinegar—fining of vinegar—pasteurizing and bottling—diseases of vinegar—vinegar from some waste Indian fruits like dates, mangoes, apples etc.

(xxiii) *Butters, preserves and candied fruits*: Definitions—fruit butters from fruits like pears, peaches, plums and apricots preserves and their general methods of preparation—preparation preserves from fruits like mango, amla, apple quince, etc—candied fruits—general principles and methods—candying of orange peel, *bers (Ziziphus jujubee)*, pears, apples etc.

(xxiv) *By-products from fruit and vegetable wastes in a factory*: By-products in a citrus factory—essential oils of oranges, lemons and limes, pectin, citric acid and citrus—orange wine—waste from fruit preservation factories—fruit peels and cores—fruit pits and stems—other wastes from canning of tomatoes, pens, etc.

(xxv) *Drying of fruits and vegetables*: Sun drying and dehydration of fruits—introductory—equipment—drying of mango pulp (*Am paper*), green mangoes (*Am chur*), apples, pears, apricots, bananas, plums, etc.

Dehydration of vegetables—Introductory—home driers and commercial dehydrates, their construction and working principles, dehydration of vegetables like okra, brinjals, bitter gourd (*karela*), radish (*muli*), turnips, white pumpkin (*ghin kaddu*), yellow pumpkin (*halwa kaddu*), cauliflower, peas, potatoes, carrots, cabbage, tomatoes, etc.

(xxvi) *Vitamins*: Definition and general properties, Vitamins A, B, C, D, E, and G. Effect of processing and cooking on vitamins.

(xxvii) *Enzymes*, general properties and importance.

Besides the above, additional lectures are also given on the following subjects by the various Heads of Divisions of this Institute.

- (1) Microbiology of Fruit and Vegetable Products.
- (2) Freezing preservation of fruits and vegetables.
- (3) Chemical Engineering.
- (4) Biochemical and nutritional aspects of fruits and vegetables and their products, and
- (5) Packaging of Food Products.
- (6) Various other items concerning fruits and vegetables preservation.
- (7) Brief outlines of the following :

Fish and meat processing, confectionery, bakery and breakfast foods, and quality control etc.

PRACTICAL: General discussion of various analytical methods—sampling—determination of moisture, nitrogen, refractrometry and spectrometry, viscosimetry, viscosimeter, electrometric, titrations, etc. Inspection of results—errors—their application to qualify control in fruit products: Vitamin analysis.

I. Preparations :

1. Canning of plums, apricots, pears, mangoes, litchies, grapefruit, oranges, tomatoes, corn spinach, peas and green gram, etc.

2. Preparation and preservation of unfermented fruit beverages (sweetened and unsweetened from orange, grapefruit, lemon, lime, *phalsa* (*Grewia Asiatica*), pomogranate, *jaman* (*Eugenia Jambolana*), plum, apricot peach, apple, tomato, mango, etc., and lime juice cordial as well as barely waters.

3. Apple cider and vinegar from waste fruits.
4. Jams from apricot, peach, plum, pear, mango, etc., jellies from apples and guavas and orange marmalade (jam and jelly type).
5. Tomato ketchup, sauce and cocktain, beans in tomato sauce, etc., mango chutney (sweet and hot), pickling of important vegetables with and without vinegar.
6. Preparation of fruit butters and pastes, candied and crystallized fruits, etc.
7. Drying and dehydration of important fruits and vegetables and citrus peels.

II. *Chemical control of the manufacturing processes :*

1. Testing of leaks in empty cans, examination of the canned fruits for factory control and diagnosis of the causes of spoilage, determination of grade of commercially canned fruits and vegetables.
2. Determination and regulation of acidity and sugar concentration in squashes.
3. Chemical control in the manufacture of jams, ketchup, sauces and candied fruits, etc.
4. Nature of water, examination of hardness and softness, softening of hard water, analysis of water, total solids, calcium, iron, sodium, chlorides, sulphates, etc., Residual chlorine test in water.

III. *Analysis of fruit products.*

A. *Physical and Chemical.*

1. Specific gravity by hydrometers and pycnometer.
2. Total, solids and moisture ; soluble and insoluble solids.
3. Acidity determination in fruit juices, squashes, vinegar, etc.
4. Ash, alkalinity of ash protein and sugars (reducing and total).
5. Determination of preservatives—Benzoic acid, sulphur dioxide, common salt, etc.
6. Detection of coal tar dyes, saccharine, minerals, acids, gelatin agar agar and starch in fruit products ; and alum, copper and iron in common salt
7. Estimates of tin, lead, and Arsenic in canned fruits and vegetable products
8. Estimation of crude fibre.
9. Determination of total and volatile acidity in vinegar. Detection of caramel in vinegar. Oxidation and Iodine value of vinegar.
10. Estimation of vitamin C in fruit and vegetable products.
11. Quantitative determination of pectin content of various fruits as calcium pectate.

12. Determination of pectin tannin content of cider and wines.
13. Ph determination of juices, jellies, etc.
14. Detection of pinholes in a can.
15. Enzymes : Qualitative tests.
16. Estimation of alcohol in wines, ciders, etc.

B. *Bacteriological Technique.*

1. Preparation of media-transfer of cultures-staining-total and direct counts-coli-aerogenes test.
2. Micro-biological test of water-raw materials such as sugar spices etc., etc.
3. Detection of fermentative organisms and bacterial contamination.
4. Analysis of fermented products, like wine, cider, vinegar, etc.
5. Mould, yeast and bacterial counts in tomato products.
6. Examination of spoiled cans.
7. Preparation of yeast starter.

THE CENTRAL FUEL RESEARCH INSTITUTE

The research programme of the Institute is mainly dictated by the industrial needs of the country. Thus, in addition to the actual experimental work at laboratory and pilot plant scale levels, much effort and time of the Institute have been given to render technical aid and advice, involving in certain cases carefully planned systematic investigations, to the various State Governments, the India Government, the Planning Commission, different industries, etc. Selection of suitable coal or coal blends for the proposed State-owned steel plants, coke oven plants of the industries, like Sindri, Durgapur, etc., and the planning and drawing of specification for the coal washing plant at Kargali, and additional washing plants at Dugda, Patherdih, and Bhajudih, has largely been based on extensive and comprehensive work done at the Central Fuel Research Institute in its different sections, such as Physical and Chemical survey conducted by the Regional Coal Survey Stations, washability characteristic studies by the Coal Washing Section, coking properties investigated by the Carbonization Division, gas-making potentialities looked into by the Gasification Division, and so on. Further, the research work at the various branches of fuel and by-product utilization has led to several new patents. In this short report it is proposed to touch only on some of the chief items of achievements and activities of the Institute during the year 1957.

ASSESSMENT OF COAL RESOURCES

No industry can function efficiently without the fullest possible knowledge of its raw material. During the past few years the coal survey stations of the Central Fuel Research Institute have collected a mass of data on coal resources which are proving useful for national development plans. In fact, our knowledge of the quality of the resources is no less than that possessed by the developed countries who have been mining and utilising coal on a large scale for the past 100 years.

The reserves of good quality coking coal which could be directly used for coke manufacture without any beneficiation are practically exhausted and the production at present is limited to only about 1½-2 million tons/annum. The work of the Jharia Coal Survey Station has shown that a reserve of 500-800 million tons of medium to low grade, low volatile coals exist in the lower seams, of which nearly 60% could be utilised for metallurgical purposes for beneficiation. During the year under review the Jharia Coal Survey Station has mainly confined its attention to a general study of the survey and beneficiation of the properties of coking coal which are proposed to be treated in the central

washeries. This station alone has carried out over 700 analyses and numerous studies on float and sink properties of the Jharia coals.

The Raniganj Survey Station has been mainly devoting its attention to the survey of coals needed for the steel plant and the coke oven plant at Durgapur. This survey included the survey of weakly caking coals which could be blended with their own low temperature char or low volatile Jharia coals to yield metallurgical coke on carbonization. The B. R. K. Coal Survey Station at Ranchi entirely devoted itself to the exploration of coal in the public sector in the Kathara area and the virgin areas containing high volatile coals in the Karanpura coalfield. This station has also extensively studied the blending characteristics of coal in the East Bokaro and South Karanpura coalfields.

The Central India Coal Survey Station at Bilaspur mainly devoted itself to exploration of coal in the public sector in the Korba, Bistrampur and Jhilmili coalfields and study of the beneficiation properties of some of the non-coking coal in the area particularly the inferior coal in Korba. In view of the virgin nature of some of the coalfields work was also carried out on correlation of seams using petrography and borehole data. Also during the year the Hyderabad and Assam Coal Survey Stations went into operation. The work of the Hyderabad Coal Survey Station was mainly confined to Singareni and Tandur areas and Assam to the major coal producing areas in Margharita.

COAL PREPARATION AND BRIQUETTING

Extensive studies were carried out on the washability characteristics of a large number of coal samples drawn from over 26 collieries in the Bhaga, Mohuda, Katras coalfields particularly from V-XIII seams. On the basis of these studies, the washing characteristics of these coals have been classified and a schedule for washing them in the proposed coal washing combines of the public sector has been worked out. The section has also been undertaking tests connected with drawing of specifications for these coal washing plants.

In the normal briquetting of coals, pitch is used as a binder. But this is very costly and uneconomical. A process has now been developed at the Central Fuel Research Institute for binderless briquetting of all rank coals and by this process water resistant briquettes could be obtained even from lignite. The process however, requires confirmation by pilot plant scale trials. The carbonization properties of lignite briquettes were also studied and conditions established for obtaining carbonized briquettes with high mechanical strength, which may be suitable for use in foundries. The carbonized briquettes could also be used as domestic fuel. Studies have also been undertaken to obtain ferro-cokes from low rank coals which could be utilized in low shaft furnaces.

CARBONIZATION

The high temperature experimental plant for carbonization of coals donated by Messrs. Hindustan Steel Co. to the Central Fuel Research Institute went into operation during the current year. This plant has facilities for selective crushing, blending and stamping, and has ovens of three different widths, which should make it possible to study the coking characteristics of a wide range of coals. The carbonization properties of coals and their blends which are to be used in the steel plant and the coke oven plant at Durgapur are at present being studied. Besides this the carbonization section has also studied on a laboratory scale the influence of pre-treatment on the plastic and swelling properties of coal, its by-product yield, reactivity of coke, etc.

The travelling grate smokeless fuel plant specially designed by the Central Fuel Research Institute went into commission. In this, both coking as well as non-coking coals could be carbonized to yield highly reactive low temperature coke. The basic principle underlying is that coal burns in two stages: Firstly, the volatile matter burns and then finally the devolatilised coke. In this process combustion is only allowed to proceed to the stage of devolatilization by controlling the air feed.

The erection of a 20 ton/day capacity externally heated low carbonization plant is also under way. On the laboratory side a survey of low temperature carbonization properties of various coals and coal blends were undertaken. Correlation were also developed between the laboratory scale test and the semi-pilot plant including those obtained from the Lurgi Spul Gas at Hyderabad.

UTILIZATION OF COAL TAR AND OTHER BY-PRODUCTS

In the Coal Tar and By-product Section, investigations were carried out on the following:

- (1) Oxidation of tar oils,
- (2) Production of diesel oil by catalytic cracking of tar oil fractions,
- (3) Manufacture of hard boards and laminated products using water soluble resins obtained from coal tar,
- (4) Separation of tar acids of tar base by fractional distillation, and,
- (5) Chromatographic analyses of coal tar constituents.

The process developed for the manufacture of phthalic anhydride by oxidation of tar oil is to be studied on a pilot plant scale in a plant which is at present being designed. Negotiations are under way for the industrial exploitation of the process for manufacture of hard board and laminated products using water soluble resins.

GASIFICATION AND SYNTHETIC OIL

In the Fluidization and Gasification Section, the low temperature oxidation of Jambad-Bowlah coal were studied in a fluidized bed using different diameter columns. The oxidised coal was treated with Ammonia for the manufacture of Ammonium Humate which could be used as a fertilizer and soil conditioner. Experiments were also conducted on the fluidized carbonization of Jambad-Bowlah coals in a 4" diameter column, properties of the tar and the reactivity of coke have compared with those obtained by normal methods of carbonization.

Gasification of Jambad-Bowlah coal in 50 lb./hr. capacity Vortex gasification plant developed at the Central Fuel Research Institute was studied in detail.

In the Synthetic Oil Section, work on the Fischer-Tropsch Synthesis in a fluidized bed was continued using catalyst developed at the Institute. A process has also been developed for mild hydrogenation of low temperature carbonization tar oil fraction for converting them into diesel oil.

COMBUSTION OF COALS

In the Combustion Section, studies on the possibility of utilising high ash washery middlings from Lodna washery in pulverised fuel firing appliances (especially designed for the purpose) were investigated. It was found that accumulation of ash in the fire tubes did not adversely affect the heat transfer. The high ash in the coal reduces the efficiency of the boiler, but however the efficiency obtained in pulverised fuel firing with high ash coal was higher than when the same coal was burnt on a grate.

The fusion characteristics of Indian coals were studied in detail and formulae developed for predicting the fusion temperature from composition of the ash.

FUNDAMENTAL RESEARCH

On the fundamental side extensive investigations were carried out to understand the structure and constitution of coal. By methods and techniques completely novel in research in coal chemistry, the Institute has developed technique for resolving the structure of coal in a manner which may portend future application in many ways. The fundamental research has already provided an explanation as to why certain coals are liable to spontaneous combustion; why there is a critical moisture with binderless briquetting of coals including lignite; in what form organic sulphur exists in coals including high sulphur abnormal coals of Assam? The investigations have given an insight into the pattern of the basic

coal unit. The coal units consist of fused hexagonal rings of carbon atoms, stacked roughly parallel to one another in piles; the number of rings in a unit and the number of units in a pile are both lowest and for low rank coals and largest for high rank coal, and altogether 70 to 80 per cent of the carbon atoms are in these units. The rest of the carbon atoms are in the 'edge groups' which surround the units and lock them together. It is these edge groups which largely characterise the properties of coal both as a fuel and as sources of by-products and it is in the understanding of these groups that the key to the understanding of the mechanism of coking of coals is to be found. Research is therefore mainly decided to an understanding of these groups.

CENTRAL GLASS & CERAMIC RESEARCH INSTITUTE, CALCUTTA-32

INTRODUCTION

It is now well-established that the development of industries, essential for the welfare and advancement of a nation can be assured only through organised effort to apply knowledge revealed by scientific and technological research. The need for the establishment in the country of a research institute for glass was first emphasised by the Indian Industrial Commission in 1918, and reiterated by the Indian Tariff Board in 1932. The absence of an institution for glass research was keenly felt during World War II, when imported goods were not available and many of the requirements for which there was a great demand, could not be produced in the country. It was to meet this long felt want that the Council of Scientific and Industrial Research decided in 1944 to establish the Central Glass & Ceramic Research Institute at Calcutta. Although the construction of some of the buildings had started in 1945, adequate funds for the project were sanctioned only in 1948 by the National Government, largely through the foresight and support of the Prime Minister, and the progress of work was accelerated. The laboratory was declared open in August, 1950.

This small write-up describes briefly the functions of the Central Glass & Ceramic Research Institute and some of the results achieved by the Institute so far; it also provides an indication of some of the projects proposed to be undertaken in the near future.

FUNCTIONS

The main subjects of study at the Institute are glass, pottery, refractories and enamel. Broadly speaking, the functions of the Institute are :—

1. Fundamental research having a bearing on different branches of glass and ceramics ;
2. Standardization and testing ;
3. General technical assistance to industry ;
4. Dissemination of technical information ; and
5. Training for special work.

From the very beginning of its establishment, the Institute has had the benefit of advice in formulating its programmes of research and in matters of policy from an Advisory Board consisting of eminent scientists and leading members of concerned industries. With a view to

decentralise much of the administrative work and to give a large measure of autonomy to the National Laboratories, the Council of Scientific and Industrial Research have recently constituted an Executive Council and a Scientific Advisory Committee with Lala Shri Ram and Dr. Atma Ram * as Chairmen respectively.

PROGRAMME

During the last five years of its working the Institute has given priority to problems having a direct bearing on the needs of the industry. The policy has been to concentrate effort on a few projects and complete the investigations within a reasonable period rather than to spread the activities over a wide field. These considerations were necessitated by the present position of the Indian industry and the trends in world trade.

In following the above principle, the need for pursuing fundamental research, which must be one of the aims of a research laboratory, has been fully kept in view. Here also, emphasis has been on problems arising during the progress of applied research in the laboratory and on problems relating to glass and ceramic sciences.

The programme of industrial research and technical assistance to the industry is divided into four categories :

1. Studies on improving the quality of glass and ceramic products produced in the country with special reference to raw materials, examination of defects in the articles produced, methods for removing such defects, standardisation and methods for testing which can be adopted in works practice.
2. Substitutes for raw materials already scarce in the country or whose supplies may be cut off during emergency and utilisation of materials available in the country.
3. Investigations on the possibility of producing articles so far imported and developing new products of special use.
4. General technical assistance to the industry.

In tackling problems of the industry the practice followed by the Institute is as follows:—

Opinions are invited and discussions held with manufacturers, consumers, scientists and technologists. This procedure has appreciably helped in clearing up the "atmosphere of secrecy and aloofness" and securing a better understanding of the scientific approach.

* Director of the Institute.

Visits of senior members of the technical staff are arranged to factories to make on-the-spot study of operations and practice and technical staff from factories are invited to visit the laboratory and see the researches in progress.

Extensive trials are carried out in factories using the equipment and personnel available there, prior to recommending processes developed by research for adoption in factory practice.

Problems concerning the industry as a whole are investigated free of charge and the results are made freely available to the industry and the public by publications and through specially organised discussions. Where, however, any individual party refers a problem for special investigation, a reasonable charge covering a part of the expenses is made.

General enquiries with regard to information on the availability of raw materials, equipment, processes and other topics are promptly attended to free of cost.

Full opportunity is provided to members of the industry to discuss their problems, designs of equipment, lay outs, etc., with the technical staff of the Institute. Such discussions are kept confidential.

RAW MATERIALS

Authentic information on the country's resources of raw materials—occurrence, extent of deposit, quality, suitability for use in industry, amenability of poorer grades to beneficiation, transport facilities, etc., is essential for the development of industries. Although Indian raw materials are being utilised in glass and ceramic industries and some of them are also being exported, precise and detailed information on the above has not been available. The paucity of information not only retards the growth of mining and raw material processing industries but also affects existing factories inasmuch as they are not always able to get the raw materials they require. Also, the problem exists that some of the factories are not properly located mainly because essential information on raw material source was unavailable. Survey and assessment of raw materials for the glass and the ceramic industries form an important item in the programme of the Institute's activities. The raw materials of particular interest are: silicate minerals and rocks, such as quartz, sands and sandstones, quartzites, fireclays, chinaclays, ballclays, bentonites, feldspars, talcs, kyanite, pyrophyllites, sillimanite, fuller's earth, bauxites, zircons, chromites, limestones, dolomites, magnesite, graphite and gypsum.

SANDS, QUARTZ AND FELSPARS

Fairly detailed information based on the results of investigations at the Institute on about 200 samples of sands, quartz and feldspars required for the glass and ceramic industries, covering several States has been

published.* In addition to the occurrence, extent of deposits, chemical composition, grading, etc., results of beneficiation of poorer grades have also been given. It has been observed that several sands could be improved by simple sieving and washing. The improvement is spectacular in Travancore sands containing illmenite whose presence, in view of the high iron and titanium contents, is unsuitable for glass making. It has been established that abundant supplies of glass sands are available practically in every State. The quartz occurrences in some areas are so pure as to attract the interest of manufacturers of special optical glasses in other countries.

The Institute is well equipped with appliances for the beneficiation of glass sands and demonstrations of beneficiation techniques are arranged for the benefit of industry; also bulk samples are processed for use in factory trials.

CLAYS

Investigations on the country's clay deposits have been in progress during the last five years in collaboration with the *Geological Survey of India* and, recently, with the *Indian Bureau of Mines* and the Geological Departments of some of the States. The surveys look after the field part of the work, e.g., collection of samples, assessment of the extent of deposits, and transport facilities while the Institute examines the samples in detail for their properties and beneficiation, with special reference to their utilization in industry. So far, about 1,000 samples of clays collected from different localities have been subjected to preliminary examination on the basis of which about 100 promising samples have been selected for detailed study. In addition, 4 samples have been received from private parties. The work is in progress. The results already obtained will be published shortly.

TALCS

One of the important raw materials of the ceramic industry, extensively used in the manufacture of a variety of articles, is talc. With a view to assessing the suitability of Indian talcs, a detailed examination of samples collected from different deposits has been made, and the results have been published. India possesses abundant resources of talcs of good quality comparable with those available in other countries.

STANDARDIZATION

Standardization of raw materials and finished products of the glass and ceramic industries is being carried out in collaboration with the

* "Survey of Indian Resources of Sands & Rocks required for the Glass Industry" by Atma Ram, Karimullah, M. A. Saboor and Lal C. Verman—*Journal of Scientific & Industrial Research*, Vol. VIII, pp. 163-195, April, 1948.

Indian Standards Institution ; a major portion of the investigational work is done by the Institute. The formulation of standards requires detailed knowledge of the properties of local materials and the service performance of finished goods. Such knowledge as is available is by no means appreciable. They are, no doubt, foreign standards in most of the related subjects, but their acceptance as such is not without prejudice to the interests of Indian industries. Consequently, the Institute has undertaken detailed investigations on the performance of Indian products as a pre-requisite to the preparation of specifications and has also worked out suitable methods of testing. This is obviously a long-range activity, since the performances of products have to be studied for long periods. Further, standards may have to be revised in the light of experience and also with improvements in industrial performance. To mention a few instances, standards have been specified for sands and limestones for glass making ; glass bottles for ink ; glass ampoules and phials ; and standards for sheet glass, glass shells for electrical lamps, distilled water bottles, aerated water bottles, food jars, glass house refractories, electrical insulators, wall tiles, etc., are under preparation.

Detailed investigations are being carried out to compare the performances of Indian products with standard products in some other countries.

IMPROVEMENT IN QUALITY

Glass Containers.

India produces annually about 100,000 tons of glassware of different kinds. A wide variety of glass containers constituting about 40% (worth about Rupees one and a half crores) of the total production of the glassware, is used in chemical, pharmaceutical, toilet and other industries. Containers of inferior quality can be harmful to the interests of user trades and ultimately to consumers. Serious complaints from consumers on the poor performance of local products have been investigated in detail, and with the co-operation of producers and consumers, glass compositions suitable for the manufacture of ink bottles, distilled water bottles, mineral water bottles and fruit preservation containers have been worked out. The compositions have been so formulated that practically no change in the methods of manufacture is called for. Methods of testing the quality of containers prior to use, which are of interest to consuming industries in selecting containers, have also been worked out. The methods are now being used and complaints from consuming industries about the quality of glass bottles and imports of containers have substantially reduced.

Saggars.

Saggars are extensively used in the pottery industry for firing raw articles in kilns. They are used over and over again and the cost of

production of potteryware is greatly influenced by the life of saggars. It was ascertained on enquiry from Indian factories that the life of saggars was only 6 to 8 firings. As a result of detailed investigations, compositions for durable saggars were worked out. Service trials in three factories have shown that improved saggars withstood 18-30 firings. The saggars were made in factories utilising their existing equipments. The results have been published.

SUBSTITUTES

Borax.

The annual production of enamelware in Indian factories is valued at Rs. 1½ crores. The industry supplies essential articles required in hospitals, sanitaryware and utensils used by the common man. One of the principal ingredients of enamels is borax, for which no suitable source has so far been located in the country. The industry is, therefore, entirely dependent on imported borax. After prolonged investigations, the Institute has worked out enamel compositions which are free from borax. Extensive trials in enamel works during the last nearly 3 years have shown that the performance of ware coated with boron-free enamel is equal to that of the conventional enamelled articles. No change or modification in the existing industrial practice is called for by the introduction of the new enamel. Apart from saving foreign exchange to the extent of about Rs. 5 lakhs and assisting the utilisation of indigenous resources, the enamelling industry will become independent of imports of borax for all times.

Selenium.

The Government have rightly stressed the development of cottage industries and of utilising scientific knowledge in their development. One of the biggest cottage industries in India is the glass bangle industry concentrated in Firozabad (about 20 miles from Agra in Uttar Pradesh) and providing in one way or the other employment and livelihood to about fifty to seventy thousand people. The total annual production is valued at three to four crores of rupees. The artisans practising this traditional art have attained a high standard of skill. It is a matter of great satisfaction that whereas before the war the total value of imports amounted to about Rs. 24.2 lakhs mainly from Japan and Czechoslovakia, there are now no imports and India has a substantial market in adjoining countries. It is one of the few industries that have taken full advantage of the war exigency to consolidate their position.

Red bangles are particularly popular and constitute about 50% of the total production. Selenium is the colouring material employed. In view of its world shortage of selenium, the industry was facing great hardship. The price of selenium in Firozabad had risen as high as Rs. 300 per pound in comparison to pre-war price of Rs. 8 per pound,

and at times it is unavailable even at that price. The total amount of selenium used at Firozabad is valued at Rs. 15 lakhs per annum. In order to relieve this important cottage industry of its dependence on imports for one of the essential constituents, the Institute has been conducting detailed investigation during the last 3 years to eliminate the use of selenium in producing red bangles. The results of these investigations have been encouraging and extensive trials during the last 2 years at Firozabad, in which local artisans and equipment were utilised have proved quite successful. It is proposed to make the results of these investigations available to the entire bangle industry.

Saltcake.

Soda ash required for the manufacture of glass in India is mostly imported. During recent years, due to inadequate supplies of this material, several glass factories had to curtail production.

Before the commercial production of soda ash, saltcake was the principal source of sodium oxide in glass. Saltcake occurs in Didwana (Rajasthan) and the annual production is of the order of 7,500 to 8,000 tons. In view of the scarcity of soda ash, the Institute investigated the possibility of partially substituting soda ash by Didwana saltcake in glass manufacture. It has been found that in some classes of glassware, such as amber glasses, saltcake obtained as much without further purification could replace soda ash to the extent at least 25%, and thus provide relief to the glass industry. Saltcake is cheaper than imported soda ash. In the production of amber glasses, saltcake should be utilised even otherwise, particularly because its use dispenses with the use of imported sulphur. Saltcake serves a double purpose and effects overall economy in the cost of production of amber bottles, whose annual consumption is estimated at 10,000 tons. The results of the investigations have been published.

REFRACTORY HOLDERS IN OIL PRESSURE LAMPS

The mantles used in oil pressure lamps are held by refractory holders, which are mainly imported. Attempts to produce the holders in the past had not been successful. Investigations were, therefore, taken up at the Institute, and lamp holders were produced using indigenous raw materials, comparable in performance to that of the best imported articles. The results have been made available to producers. Holders are now being produced in the country and self-sufficiency is likely to be attained shortly.

SIGNAL GLASSES

Several types of signal glasses are used on railways and road traffic control. Although the volume of imports is not very large, signal glasses are an essential item and the production within the country is necessary

and important. The glasses have to strictly conform to rigid specifications. After detailed investigations, the Institute worked out processes for manufacturing them by utilising raw materials available in the country. Extensive trials in railway yards have confirmed that the glasses conform to specifications. The process has been assigned by the National Research Development Corporation to an Indian firm with whom the Railway Board have already placed a trial order.

CHEMICAL PORCELAIN

A wide variety of imported porcelain articles technically known as chemical porcelain, such as crucibles, dishes, funnels, basins, etc., is used in scientific institutions and research laboratories. The Institute has succeeded in working out processes for the manufacture of chemical porcelain from indigenous raw materials, and the articles produced have been tested in several laboratories including the National Chemical Laboratory, Poona; Indian Institute of Technology, Kharagpur; University College of Science, Calcutta; and the Indian Association for the Cultivation of Science, Calcutta; and found to compare favourably with some of the best imported materials. The cost of production is expected to be lower than that of imported products, and when produced in the country, technical institutions will be relieved of dependence on imports for an essential requirement. The process has been assigned by the National Research Development Corporation to an Indian firm, which is shortly to start production of this item.

MICA

In the production of mica splittings, about 15% of the mica is reported to be recoverable as saleable material; the rest goes waste. Huge quantities of waste mica have accumulated in mica fields. In order to assist the industry, as also to find uses of mica waste, the Institute has worked out a simple process for making heat-insulating materials which were hitherto being produced from vermiculite imported into this country principally from South Africa. This process has been patented. Mica insulating products will be much cheaper than the corresponding vermiculite articles. Factory trials have confirmed that the performance of mica products is comparable to that of vermiculite products. These results will help in the utilization of waste mica and also lead to the establishment of a new industry producing cheap heat insulating materials, which are used not only as backing in industrial furnaces for reducing radiation losses, but also for insulating dwelling houses and buildings.

SUN GLARE GLASSES

Sun glare glasses, known as goggles, are imported in a tropical country like India and are entirely imported in substantial numbers. The essential requirement is that the glasses should cut off the ultra-violet and infra-red portions of the spectrum injurious to the eye and also reduce transmission in the visible region. About a dozen imported sun glare glasses of different makes available in the market were examined, and several of them were found to be unsuitable for Indian conditions due to their inability to effectively absorb heat rays. After a detailed investigation, glass compositions for making sun glare glasses, which will meet most of the requirements except of a good sun glass under Indian conditions have been worked out. The results have been published in the C.G.C.R.I. Bulletin.

ENAMEL-COATED RESISTORS

A wide variety of resistors coated with vitreous enamel are used in electrical industries and are entirely imported. In view of the interest shown by some firms in undertaking their manufacture in the country, investigations were taken up at the Institute to work out enamel compositions suitable for coating resistors. Compositions satisfying the exacting specifications (U. S. Navy Specifications) for electrical insulation, thermal resistance and water solubility have been formulated. The process has been assigned by the National Research Development Corporation to an Indian firm which has commenced production of enamel-coated resistors.

COPPER ENAMELS

Vitreous enamelling is mostly carried out on iron sheets. In recent years, however, enamelling on copper sheets is demanded for special uses. For instance, telephone dials are made by punching and enamelling copper sheets. The Indian Telephone Industries, Bangalore, were interested in the production of enamels suitable for coating copper. The work was taken up at the Institute, and the compositions prepared at the Institute have been found to be comparable in performance with that of imported enamels. The processes have been patented and the National Research Development Corporation is negotiating their utilization by industry. The compositions are suitable for enamelling a wide range of copper articles.

FOAM GLASS

Foam glass is a unique, light weight thermal insulation material. Essentially it is glass expanded about ten to fifteen times into a multitude of non-communicating cells, resembling more or less the structure of a honey-comb. It combines rigidity and moderate strength with

lightness and high insulating efficiency. Being incombustible, rot-proof and impervious to moisture and vapour, it does not unlike cork, deteriorate during use.

Foam glass is being manufactured on a commercial scale in U.S.A., U.S.S.R., and a few other countries and the details of manufacture are closely guarded secrets. The product finds extensive applications in building, air-conditioning and cold storage industries, as also for insulating hot and cold pipes, tanks, etc. Its use in dwelling houses contribute to indoor comfort and in modern buildings, it contributes to substantive reduction in the costs of air-conditioning or heating.

In view of its importance in a tropical country like India, the Institute undertook investigations to work out processes for producing this material. The processes are now undergoing pilot plant trial, and on the basis of information obtained so far, it has been concluded that foam glass would compete successfully with other imported insulating materials. India's requirements of insulating materials, including cork slabs, glass wool, expanded plastics, etc., are large and are mostly imported. Imports of cork slabs alone during 1955-56 were valued at about Rs. 48 lakhs.

In view of the difficulty of obtaining cork from European countries, of which Portugal is the principal supplier, the results of these investigations open up the way for starting a new industry of great potential value.

AUTOMOBILE SPARK PLUGS

Automobile spark plugs are being made in the country by two firms at Bombay and Bangalore in collaboration with foreign firms, but its ceramic parts are entirely imported. Although actual figures for imports are not available, the total value of annual imports may be of the order of Rs. 15 to 20 lakhs. The Institute has undertaken investigations on the possibility of producing these ceramic parts in the country. More than 1,000 spark plugs have been produced in the laboratory and subjected to extensive tests. They are being tested also by the two firms at Bombay and Bangalore and found to be more or less satisfactory. Further work is in progress and is likely to be completed within a year.

DENTAL PORCELAIN

Artificial teeth are now entirely imported. They are made from porcelain plastics, but in view of the superior abrasion resistance and durability of the former, porcelain teeth are preferred. Total imports of dental porcelain are valued at several lakhs of rupees. Investigations on dental porcelain have been undertaken at the Institute and samples of teeth produced have been tested and found to be satisfactory with

regard to modulus of rupture, compression, translucency, heat shocks, resistance to acids and colour. Arrangements are in progress for actual trial by the dental profession. The work is expected to be completed in about a year.

REFRACTORIES

A large variety of special refractory parts, some of which are used also as sheaths, crucibles, furnace tubes, etc., are required in industries, technical institutions, etc., and are mostly imported. The total volume of this trade is not enough to interest any firm to undertake their manufacture. The components are, however, very essential. The Institute organised a small section mainly to meet its own requirements, but later, it was expanded to meet the requirements of other needy parties. Hundreds of parties have benefited by the service during the 5 years. The demands have now increased to such an extent that a special section of the Institute has to be organised to meet that.

In its programme of work on substitutes for principal imported raw materials and the possibility of manufacturing in the country of articles hitherto entirely imported, the Institute has been mainly guided with the idea of making the country independent of imports rather than saving the total value, which by itself is very substantial. It will be appreciated that for lack of some essential materials, some sections of the industries may have to be entirely stopped. The results of all these investigations should help in establishing some novel industries, such as mica insulating bricks, foam glass, etc., and provide additional employment.

BULLETIN

Dissemination of information is one of the functions of the Institute and to perform it more efficiently, the Institute has started a quarterly Bulletin in which the results of researches conducted in the laboratory are published. In addition, summaries of important work done elsewhere and information with regard to availability of raw materials and equipment, technical information, statistics relating to production and imports, and important current topics of interest to the industry are also included. During the two years of its publication, the Bulletin has become popular and is widely subscribed for by industry, universities, technical institutions and Government departments. It has a fair circulation in other countries also, and it is abstracted in all world periodicals dealing with glass and ceramics.

OPTICAL GLASS

As an essential requirement of a whole range of optical instruments, such as binoculars, telescopes, microscopes, cameras, etc., optical glass is regarded as one of the key materials for the armed forces whose

fighting equipment requires a wide variety of observation instruments. In fact, optical glass has become popularly known as the "Eye of the Army". It is essential for research laboratories, photography, and many other important uses. Optical glass is now entirely imported.

It may be mentioned that production of optical glass is nowhere undertaken from the point of view of profit. It is a product of strategic importance and the methods of production are closely guarded secrets. It is perhaps for this reason that attempts made by the Government during the past two decades to secure collaboration with foreign optical glass manufacturers have not proved fruitful.

Detailed investigations conducted at the Institute have shown that raw materials of superior quality, required in making optical glass, are available in the country, a fact which had not so far been generally acknowledged. Some officers of the Institute have been specially trained in the optical glass plant of the American Government attached to the National Bureau of Standards, Washington. The Institute has a good nucleus for initiating its manufacture and the Planning Commission have already accepted a scheme for setting up an optical glass unit at the Institute.

It is hoped that with the establishment of this unit, the country will not only become self-sufficient in the matter of producing optical glass, but will also encourage the establishment of an optical instrument industry in the country.

THE CENTRAL INLAND FISHERIES RESEARCH INSTITUTE

The Central Inland Fisheries Research Station was established with temporary Headquarters at Calcutta in the year 1947, for the purpose of conducting scientific investigations for a proper appraisal of the inland fisheries resources of India and to evolve suitable methods directed towards their proper conservation, management and development. Permanent laboratory, hostel and residential buildings of the Station are under construction at Barrackpore, 15 miles north of Calcutta and the Research Station is expected to shift there in a year's time. The Station has at present two Sub-Stations; one at Cuttack (Orissa) dealing with studies on pond culture of fresh-water fishes and another at Allahabad (U.P.) for studying the riverine and lacustrine fisheries. A number of Research Units have been established recently in the Station, including one located at Balugaon (Orissa) to conduct studies on the fisheries of the Chilka lake. Dr. B. S. Bhimachar is the Chief Research Officer of the Station and the different Sections and units are in charge of senior officers with wide experience in inland fisheries research. There are 108 technical officers of different categories and 21 ministerial staff in the Station. The Institution maintains a fairly good library of books and periodicals, which are available for workers from other Institutions also for reference. A 40' diesel engined motor launch with facilities for laboratory and field work is stationed at Calcutta for investigations in the estuarine areas. A 22' dan boat has been recently obtained for field work in the River Ganga. A 54' estuarine research vessel with facilities for research and fishing is expected to be obtained very soon. The annual recurring budget of the Research Station at present (1956-57) is about Rs. 5.98 lakhs. A sum of Rs. 20.91 lakhs has been allotted under the Second Five Year Plan for expanding the activities of the Station.

The scientific work of the Institution is broadly divided into four main divisions, Pond Culture, Riverine & Lacustrine, Estuarine and Fisheries Training. The work of the Pond Culture section is concentrated at present in Orissa. Experiments in the culture of Indian Major Carps and Tilapia are conducted at the experimental fish farm of the Station at Cuttack and in a number of selected fish farms in different parts of Orissa. On the basis of the experimental work conducted so far, it has been possible to evolve and standardise suitable techniques for the successful rearing of carp fry to fingerling stage reducing the percentage of mortality to a very low level. This has helped in increasing the production of fish seed for cultural operations. Experi-

ments are now being conducted with a view to standardising methods of culturing carp fingerlings to a marketable size. Investigations on the efficiency and economics of different types of manures for increasing the productivity of fish ponds, the role of soil in pond productivity, various methods of controlling rank growth of vegetation in different types of waters etc. are in progress. The Major Carps of India do not breed in ordinary fish ponds and carp seed has to be collected from the natural breeding grounds of these fish in rivers, involving considerable expenditure and a high rate of mortality during transport. Experiments are now being conducted in inducing them to breed in confined waters by the application of pituitary extracts. Studies on the desirability of introducing the exotic fish, *Tilapia mossambica* in the carp culture areas of India and the possibility of utilizing paddy fields for the culture of fish, are two other important items of work being conducted at Cuttack. The Pond Culture section has also been providing technical assistance to some of the State Fisheries Departments by helping them to locate and collect fish seed and demonstrating improved cultural techniques.

The Riverine & Lacustrine Section, which is stationed at Allahabad is mainly engaged in investigations on the fish and fisheries of the Ganga River. The biology of a number of riverine fishes of economic importance, has been studied in detail. An intensive programme of survey to assess the fisheries of the river has been initiated recently. The Section has also been engaged in locating, the breeding grounds of carps in various river systems and assisting State Governments in exploiting them. Studies were undertaken to standardise an economical method of transporting carp seed in oxygen-filled containers. Surveys in connection with the construction of multi-purpose river valley projects, for the purpose of formulating suitable measures of fishery development in the reservoirs and river basins have been a regular programme of work of the Section. A new Research Unit has been established with temporary Headquarters at Calcutta to evolve suitable methods of developing and managing the lake and reservoir fisheries. The establishment of numerous industrial installations along the rivers has given rise to the problem of river pollution on account of the discharge of industrial effluents and domestic sewage, which seriously affect the fishery resources of these waters. The Section has been investigating the extent of damage caused to fisheries by pollution in selected areas and recommending remedial measures. In view of the rapid industrialisation of the country, investigations of water pollution on a large scale a separate Unit has been established for the purpose.

The Estuarine Section of the Institution undertakes investigations on the capture and culture fisheries of brackishwater areas. The Section is located at present at Calcutta. Basic studies on the biology of a number of important groups of estuarine fishes such as the Hilsa, Mul-

lets, Thread fins and Prawns have been conducted. A sampling survey to collect statistics of fish catches from the dispersed estuarine areas of West Bengal was initiated by the Section for the first time, and the reliability of the technique employed is being tested by a Statistical Unit which has been recently established to design suitable methods for the collection of catch statistics from inland waters. A number of Survey Centres have been established in different parts of the estuarine areas. A programme of investigations to assess the magnitude of fish populations of the Hooghly and Matlah estuaries in West Bengal and the Mahanadi estuary in Orissa, as also the factors affecting the fluctuations of the fisheries in them, including hydrobiological features, is now in operation. Hilsa affords a fishery of very great importance in India, Pakistan and Burma. On account of its importance and the marked fluctuations observed in its catches from year to year, Hilsa fisheries of the region has formed a subject of special interest to the Indo-Pacific Fisheries Council. On the recommendation of the Council, a National Hilsa Research Unit has been established in the Section to conduct detailed investigations on the Hilsa fisheries of India in co-operation with the Governments of Pakistan and Burma. Considerable progress has been achieved in recent years in studies of the population structure and life history of the fish.

There is vast scope for the development of brackishwater fish culture on a commercial scale in the estuarine and coastal areas of the country. Indigenous practices of culturing fishes like Mulletts, Bhetki and Prawns also exist at present in certain States. With a view to developing scientific methods of culturing these fishes, observational and experimental studies have been undertaken in the Section. The role of soil in the productivity of brackishwater ponds and the factors governing the growth and multiplication of algae which form the food of many of the cultivated fishes are being studied now. An experimental brackishwater fish farm will be established soon in West Bengal to conduct large-scale experimental studies.

A separate Research Unit to investigate the fisheries of the brackish water lake of Chilka (Orissa) which is believed to be getting depleted, has been established recently under the Second Five Year Plan.

Ever since the establishment of the Station, the training of candidates, deputed by various States and other organisations, in inland fishery science and administration has been an integral part of its activities. The candidates, who are generally biology graduates, are given a ten months' course of instruction including extensive practical and field work. 130 candidates have so far received training in the Station. Besides these, a number of officers deputed by State Governments and by certain Asian countries have been given specialised short-term training in the Station.

APPENDIX

The non-availability of good quality fish seed was a great handicap in the way of extending fish culture in many States of India. The Station, therefore, started a programme of crap seed supplies to deficit States in the year 1950. The supplies were arranged through a Fish Seed Syndicate sponsored by the Station. At present this work is handled by the Fisheries Extension Unit of the Ministry which was till recently attached to the Station.

The principal Scientific Officers and staff of the Central Inland Fisheries Research Station are :—

At Headquarters Station — Calcutta

Chief Research Officer and Head of the Department	Dr. B. S. Bhimachar
Research Officer (Estuarine)	Dr. T. V. R. Pillay
Research Officer (Hilsa)	Dr. K. K. Sarojini
Assistant Research Officer (Pond Biology)	Shri V. R. Pantulu (now on deputation to Canada)
Assistant Research Officer (Statistics)	Shri N. R. D. V. Thampuran

Research Assistants

Shri B. B. Bose
„ M. M. Kunju
„ A. N. Ghosh
„ R. M. Bhowmick
„ A. K. Gorai
„ M. K. Kutty
„ H. P. C. Shetty
„ K. K. Ghosh
„ P. D. Gupta
„ P. Sitaramiah
„ S. B. Saha
„ M. R. Vijayaraghavan
„ S. C. Thakurta
„ S. K. Majumder
Computer Shri D. D. Chakraborty

Survey Assistants

Shri H. R. Kandar
„ S. N. Datta
„ A. Chowdhury
„ S. Banerjee
„ D. D. Malo
„ A. Ghosh
„ S. N. Sar
„ P. B. Das
„ Y. Rama Rao
„ D. Prusty

Laboratory & Field Assistants

Shri B. K. Saha
„ M. M. Saha

Pond Culture Sub-Station — Cuttack

Research Officer (Pond Culture)	
and Officer-in-Charge	Shri K. H. Alkumhi
Assistant Research Officer	
(Chemistry)	Shri S. M. Banerjee
Assistant Research Officer	
(Botany)	Dr. M. T. Philipose
Assistant Research Officer	
(Estuarine Fishery Biology)	Shri H. L. Choudhuri

Research Assistants

Miss Eva Mitra
Shri A. K. Banerjee
„ M. Vijayalakshmanan
„ S. N. Chatterjee
„ H. Rai
„ K. H. Ibrahim
„ T. Ramaprabhu
„ G. N. Saha
„ S. C. Banerjee
„ R. N. Pal

Laboratory & Field Assistants

Shri John Andrews
„ B. Singh
„ D. K. Chatterjee
„ S. V. Rao
„ J. M. Pande
„ D. Behera

Riverine Sub-Station — Allahabad

Research Officer (Riverine & Lacustrine)

and Officer-in-Charge

Dr. M. P. Motwani

Assistant Research Officer

(Riverine & Lacustrine)

Shri A. David

Research Assistants

Shri P. Roy

„ S. B. Singh

„ K. L. Sehgal

„ B. N. Saigal

„ B. V. Govind

„ G. Prasad

Survey Assistants

Shri S. P. Singh

„ M. J. Bhagat

„ C. B. Srivastava

„ K. P. Srivastava

„ G. N. Srivastava

„ R. K. Saxena

„ S. K. Wishard

„ G. D. Despande

Laboratory & Field Assistant

Shri H. C. Sainani

Chilka Investigation Unit — Balugan, Orissa

Research Officer (Chilka Investigation)

and Officer-in-Charge

Dr. V. G. Jhingran

Research Assistants

Shri K. H. Sujansinghani

„ S. J. Karamchandani

„ S. Patnaik

„ K. V. Ayyengar

„ N. Roy Chowdhury

Survey Assistants

Shri S. Desmahapatra

„ K. Misra

„ S. Jena

„ D. Bhowmick

Lacustrine Unit, Tungabhadra Dam — Hospet

Research Officer (Lacustrine)

Dr. Y. R. Tripathi

Research Assistants

Shri D. V. Pahwa

,, G. K. Bhatnagar

,, K. N. Krishnamurthy

Fisheries Training Section — Calcutta

Fisheries Training Superintendent

Shri J. C. Malhotra

Assistant Fisheries Training

Superintendent

Shri R. Balasubramanyan

CENTRAL LEATHER RESEARCH INSTITUTE, MADRAS

This is one of the National Laboratories established by the Government of India under the auspices of the Council of Scientific and Industrial Research to promote the development of the Indian Leather Industry along modern lines.

ENTRANCE QUALIFICATIONS FOR EACH COURSE

Students who have passed B.Sc., Intermediate and Pre-University Examinations are eligible for admission to the B.Tech. Degree Course in Leather Technology in the A. C. College of Technology, University of Madras. They are given training in leather subjects at this Institute under arrangement with the Madras University.

DURATION OF EACH COURSE

For B.Sc. graduates	2 years.
„ Intermediates	4 „
„ Pre-University students	5 „

Besides the students of the A. C. College of Technology, short-term refresher courses are conducted for the benefit of the members of the tanning industry. The members of the Research Staff of this Institute are eligible to submit theses for research degrees of the Madras and other Universities.

STATEMENT OF LATEST FIGURES FOR TOTAL NUMBER OF STUDENTS

B.Tech. Degree Course	12
Members of the Staff of the Institute registered for Research Degrees	28

GOVERNMENT GRANTS, ETC.

The Council of Scientific and Industrial Research have granted the following recurring grant per year for the Central Leather Research Institute :—

April 1950 to March 1951	Rs. 1,27,000
„ 1951 „ 1952	Rs. 2,00,000
„ 1952 „ 1953	Rs. 4,15,000
„ 1953 „ 1954	Rs. 6,91,700
„ 1954 „ 1955	Rs. 5,78,200
„ 1955 „ 1956	Rs. 7,49,100
„ 1956 „ 1957	Rs. 9,02,000
„ 1957 „ 1958	Rs. 9,34,400

Out of a donation of Rupees two lakhs promised by the tanners of the Madras State for the establishment of the Institute, a sum of Rs. 1,21,504 has been actually received.

SUBJECTS IN WHICH FACILITIES FOR POST-GRADUATE
STUDIES AND RESEARCH EXIST

Research facilities are available in Chemistry, Physics, Bacteriology, Biochemistry and Microscopy of leather manufacture and actual leather manufacture.

ANY SPECIAL FACILITIES IN THE FORM OF
SCHOLARSHIPS, ETC.

The Council of Scientific and Industrial Research awards Junior and Senior Fellowships of the values of Rs. 200 and Rs. 400 per month respectively to holders of M.Sc. degree, Graduate degree in Technology and Ph.D. degree, tenable at this Institute. The duration of the award is normally 2 years.

CENTRAL RESEARCH INSTITUTE, KASAUJI, INDIA

The Institute is financed by the Government of India, and is administered by the Director General of Health Services, on behalf of the Ministry of Health. It was established in 1906 and is located at Kasauli, in the Simla Hills, about 6,000 feet above sea level. The original site was presented by the Maharaja of Patiala, and the then existing residential buildings were modified, extended and suitably adopted for laboratory use. Extensive alterations and additions were made in 1933 and 1939. The functions of the Pasteur Institute of India were incorporated with those of the Central Research Institute in 1939. During the last ten years, efforts have been directed to the provision of additional buildings to cope with the increasing work of the Institute. Two separate buildings, viz., the Rabies Research Centre and the Anaerobic Block, additional stables for horses, and quarters for syces have been constructed. Recently, a 4-acre estate adjoining the Drumbar Estate has been acquired to provide sites for the construction of a separate Serum Concentration Block, an Animal House for small laboratory animals and still more stables to keep pace with the Institute's expanding activities. The constructional work in this respect will start shortly. The Central Research Institute was opened in 1906 under the Directorship of Lieut.-Colonel later Sir David Sample (1906-1913), who was succeeded by Lt.-Col. W. F. Harvey (1913-1925), Col. Sir Samuel Rickard Christophers (1925-1932), Major General Sir John Taylor (1932-1944), Lt.-Col. H. W. Mulligan (May 1944-1947), Lt.-Col. M. L. Ahuja (1947-Sept. 1955) and Dr. C. B. D'Silva, Offg. Director, from 20th September, 1955 to date.

The Institute chiefly provides facilities for :—

- (i) Research work on problems of medical and public health interest.
- (ii) Manufacture of vaccines and sera.
- (iii) Training of selected medical officers and technicians in medical research and laboratory technique, and
- (iv) To act as a centre on which enquiries in the field can be based.

The activities of the Institute have varied from time to time, depending on the experience and specialised knowledge of members of the staff. Immunological problems have always been the main subjects of research, as well as much attention has been paid to such subjects as Medical Entomology, Malaria, Kala-azar, Snake Venoms, Cholera, Rabies, etc. Routine diagnostic work, histopathological examinations for diagnosis of tumours and morbid tissues, Bacteriological examinations for

T. B. Enteric, Intestinal Pathogens, Diphtheria, etc., supply of stains, agglutinable suspensions, high titre diagnostic sera, preparation of auto-genous and a large variety of curative vaccines are some of the duties of the Institute.

PATTERN OF MANAGEMENT

The Institute now comprises of the following six sections, each in the charge of an Assistant Director, who is also an officer of the Medical Research Department.

- (1) Bacterial Vaccine Section.
- (2) Antirabic Vaccine Section.
- (3) Biological Standardization Section.
- (4) Serum Concentration Section.
- (5) Biochemistry Section.
- (6) Antibiotic Section.

The Institute maintains a large collection of bacteria which are pathogenic to man and acts as the National Collection of Type Cultures for country. It acts as an Information Bureau and has to answer hundreds of enquiries in the course of a year from Medical Officers, lay-public, civil and military establishments, on all sorts of scientific and non-scientific points relating to use of vaccines, sera, diagnostic reagents, snakes and their identification, treatment of snake-bite cases, rabies and antirabic treatment, etc. The Director is responsible for the inspection and licensing of firms engaged in the manufacture of biological products, and for the testing of samples before recommending their acceptance by the Government. This Institute acts as the Government of India's Assay Centre under the Drugs Act (1940) for the control of biological products imported or manufactured in India.

TRAINING OR TEACHING ACTIVITIES

The Institute sends out members of its technical staff for specialised training available elsewhere and offers facilities for training to doctors and technicians, from within and outside the country (including technical personnel of commercial firms) in the manufacture, assay and standardization of biological products. Besides, a course of three weeks' duration is held annually for imparting training in Rabies and Antirabic Treatment at this Institute and is open to Medical and Veterinary Officers in Government service.

Several countries, notably Thailand, Burma, Afghanistan, Iraq, Ceylon, etc., have sent their doctors for bacteriological training to this Institute in the last few years.

The Director is the Editor of the Indian Journal of Medical Research, four issues of which are published annually. This Journal is the principal medium for publishing the results of original medical research work carried out in India.

CENTRAL ROAD RESEARCH INSTITUTE

P. O. CRRI, NEW DELHI (India)

HISTORY

Although the importance of Road Research has long been known, it was not until the recent rapid tempo of industrialisation in India, and urgent needs of food production and transportation that the potentialities for research work were fully realised for constructing good roads, improving the existing one and maintaining all these properly in an efficient and economical manner to get the maximum benefit for the country.

The need for a Central Road Research Institute for India was emphasised for the first time at a conference of Chief Engineers of provinces and states held in December 1943 at Nagpur. Finally definite proposals for the establishment of a Central Road Research Institute were initiated due to the dynamic efforts of Dr. S. S. Bhatnagar, the then Director, Scientific and Industrial Research, Government of India. Their untiring efforts resulted in the opening of the Central Road Research Institute, Delhi, by the Hon'ble Prime Minister of India, Shri Jawaharlal Nehru, on the 6th of July, 1952.

FUNCTIONS

The main functions of the Institute are :—

1. Fundamental research on the behaviour of material used for Road Construction
2. Correlation of test results on standard materials with those under practical conditions for enabling reliable estimates to be formed of the behaviour of road materials.
3. Tests on soils and study of soil mechanics.
4. Research connected with standards and specifications for roads and road-building plants and machinery.
5. Design of instruments for road tests.
6. Studies on road characteristic under different traffic conditions, incidence of accidents, road safety devices and road statistics.
7. Collaboration research projects with engineering colleges, re-research institutes and industrial concerns.
8. Technical advice and assistance.
9. Dissemination of results of research by pamphlets, films, etc. for the benefit of road engineers.
10. Training of road technologists.

ORGANISATIONAL SET UP AND CO-ORDINATION OF WORK

Close liaison between the Central Road Research Institute and other research and experimental stations and learned bodies, like the Indian Roads Congress, is envisaged.

For obtaining best results from research, the Institute will always work in collaboration with the Roads Organisation of the Ministry of Transport, Government of India.

In order that problems of mutual interest are exchanged between the various organizations, co-operative research schemes will be undertaken with all road research bodies in the country, so that duplication of technical work may be avoided and laboratory researches and field experiments could be efficiently and economically carried out together, thus leading to the maximum benefit to each of the participating concerns.

DIVISIONS OF THE INSTITUTE

For carrying out the above functions, the technical work of the Institute is organised in the following five *divisions*.

1. Soils Division.
2. Concrete Division.
3. Bituminous Materials Division
4. Roads Division.
5. Traffic Engineering, Economics and Statistics Division.

The first four divisions deal with the materials and methods of construction while the fifth division deals with the problems relating to flow and safety of road traffic. Besides, there are eight ancillary sections of the Institute. viz.

1. Information Library & Museum
2. Workshop.
3. Administration.
4. Accounts.
5. Purchase and Stores
6. Civil.
7. Drawing and Photography.
8. Horticulture.

BUILDING AND OTHER CONSTRUCTION

Prior to the construction of the main building, the laboratory was accommodated in a temporary building, built of American Plywood sheets and research work on a small scale was undertaken from October, 1950.

The first stage of construction consisting of Administration and Technological Blocks has been completed. The Administration Block contains a general Administrative Section, including the Director's office, a small library, a lecture hall and a conference room.

The Technological Block houses the research Divisions in four spacious halls 60' x 28' with attached rooms for office use. The unique feature of the above hall is the roofing composed of five continuous shells reinforced concrete. The shell is 2½" thick and is stiffened on lower edge by reinforced concrete beam 4' 9" deep. Thus the design of the 60 ft. span halls without central pillars gives great flexibility in arranging the different sections of the research Divisions.

In the next stages of construction it is envisaged to take up (1) the second floor housing the Economics and Statistical Division, Photography and Drawing Sections, (2) Library, (3) The auditorium and (4) Canteen.

An experimental Test Track, about 5 furlongs long and consisting of black top surfacings, has been built at a cost of 1 lakh on the main Delhi-Mathura Road in front of the Institute, along with a permanent diversion road for diverting the normal traffic while the experiments are being carried out.

STAFF

Director	Mr. S. R. Mehra, C.E., M.I.E., M.I.C.E. (England)
Dy. Director	Dr. R. K. N. Iyengar.
Asst. Directors	Dr. H. L. Uppal (Soils Div. & Concrete Div.) Mr. C. G. Swaminathan (Bituman Div.) Dr. Bh. Subbharaju (Roads Div.)
Senior Scientific Officer	Mr. Tejbir S. Khanna, Incharge Traffic Engg., Economics, and Statistics Div. and Information Section
Administrative Officer	Mr. Nau Nihal Singh.
Accounts Officer	Mr. V. Paramasivam.

Besides the officers mentioned above, there are several senior and junior scientific officers and assistants to help the Divisional heads. In addition to these, there are adequate technical and administrative staff to man the workshop and the Administrative Sections.

The total present strength of the Institute is 327 including class IV employees.

FOREST RESEARCH INSTITUTE AND COLLEGES

P. O. NEW FOREST, DEHRA DUN

Forest Research Institute (for Forest Research including Forest Products Utilisation Research), New Forest.

Indian Forest College (for Forest Officers), New Forest.

Northern Forest Rangers College (for Forest Rangers), New Forest.

Southern Forest Rangers College (for Forest Rangers), Coimbatore.

GENERAL

A Forest School was founded at Dehra Dun in 1878. It became also a recognised centre of forest research in 1906, when a staff was appointed to investigate problems connected both with the growing of forests and with the utilisation of forest produce.

In 1914, the first Forest Research Institute was opened on the Chandbagh Estate, Dehra Dun. Within a very few years the war demand for forest produce emphasised the scope and need for extensive research far beyond that for which accommodation had been provided. Plans were, therefore, made for a new Forest Research Institute at the New Forest Estate, a few miles out of Dehra Dun, and it was opened on the 7th November, 1929. The old Institute was converted into the Indian Forest Service College, but with the closing of that College in 1932, the whole of the Chandbagh Estate was given up, which, with many additions and modifications, now forms the "Doon School".

While the Forest Colleges at Dehra Dun have their own separate staff for instruction in general forestry and forest engineering and surveying, both at headquarters and on tours, the Colleges form an integral part of the Forest Research Institute and Colleges and the research officers of all the branches of the Research Institute lecture to the students in their respective subjects.

FOREST RESEARCH

The main building of the Forest Research Institute at New Forest covers an area of 7 acres, and contains laboratories, museums, a herbarium, and up-to-date central and branch libraries. There are also separate buildings housing chemical laboratories, an insectary, a saw-mill, a pulp and paper plant besides the wood working, timber preservation, composite wood, wood seasoning, and timber testing branches.

The surrounding grounds, which cover 1,150 acres, include a botanical garden, some 250 acres of demonstration plantations, experimental gardens and nurseries.

The activities of the Forest Research Institute are mainly directed towards research and the Institute functions as a centre for the whole country for technical instruction and for the service of information on all technical matters connected with forests and forest products. The work is divided amongst the following 14 Branches which are grouped under 6 Divisions named against them :—

<i>Names of Branches</i>	<i>Names of Divisions.</i>
1. Cellulose and Paper.	} Division of Chemical Technology.
2. Chemistry of Forest Products.	
3. Minor Forest Products.	
4. Composite Wood.	} Division of Mechanical Technology.
5. Timber Mechanics.	
6. Timber Engineering.	
7. Wood Seasoning.	} Division of Seasoning and
8. Wood Preservation.	
9. Botany.	} Division of Forest Botany.
10. Wood Anatomy.	
11. Entomology.	} Division of Forest Protection.
12. Forest Pathology.	
13. Silviculture.	} Division of Forestry.
14. Logging.	

The above-mentioned first eight branches and Wood Anatomy Branch are connected with Forest products utilisation. Forest Botany, Entomology, Forest Pathology and Silviculture Branches deal with forestry and forest protection. Logging Branch deals with timber extraction, conversion and transportation.

In addition to the above, the following three Branches are grouped under the Central Services Division, directly under the President, Forest Research Institute and Colleges :—

1. *Service Branch* :— It is responsible for the maintenance and repair of all mechanical and electrical equipments and furniture at the Forest Research Institute and Colleges.

2. *Statistical Branch* :— Ensures correct lay-out of experiments and statistical analysis of data.

3. *Publicity and Liaison Branch* :— Attends to the publication and distribution of research papers, and maintains liaison between the Institute on the one hand and State Forest Departments, Forest Industries and Scientific and Technical Institutions on the other.

No regular courses of training are conducted, but limited facilities are available for training in research methods and for the training of technical personnel for related industries. A certain number of post-graduate students are also taken for undertaking specified pieces of research under the guidance of the Branch Officers concerned. Although the starting date of these courses for technical and post-graduate studies is fixed as 15th July each year under the rules for each course, students are also admitted on dates other than this as and when convenient to the Branch Officers concerned. Silvicultural and statistical training and refresher course for forest officers from States are also conducted as and when necessary.

In 1957 a regular diploma course of one year duration for the post-graduate students had been started in the Cellulose and Paper Branch of the Institute. At present admissions are limited. The students after the successful completion of the course will be awarded the diploma of D.F.R.I.

In October 1956, the Research Laboratory at Bangalore in the former Mysore State was taken over by the Government of India, and placed under the administrative control of the President, Forest Research Institute and Colleges. This centre is now known as "Forest Research Laboratory" and acts as a research centre for the southern region.

FOREST EDUCATION

Forest education in India was started in 1878 at the Forest School at Dehra Dun for the training of Forest Rangers. The school came directly under the Government of India in 1884, and as the Imperial Forest College trained Rangers at first for the entire country. Dehra Dun has remained the headquarters of forest education for the training of forest Rangers, though for the period 1912 to 1939 and again 1945 to 1948, Rangers for the Central and South Indian region were trained at the Southern Forest Rangers College at Coimbatore. With effect from 1948, the training of forest Rangers is undertaken by the Government of India at the two centres—Dehra Dun and Coimbatore.

In 1912 a separate course was started for the Provincial Forest Service as then constituted. This course was closed in 1928 with the cessation of direct recruitment to the old Provincial Services. From the 1st November, 1926, the training of Indian probationers for the Indian Forest Service was started, a separate Indian Forest Service College being established in the old Forest Research Institute buildings at Chandbagh, Dehra Dun. This college, however, had to be closed in November 1932, owing to the cessation of recruitment to the Indian Forest Service.

Following the constitutional changes since 1935, the old Indian Forest Service is slowly disappearing, and in its place each State is building up its own Superior Forest Service. For the training of officers

for these new State Forest Services, the Indian Forest College has been established at New Forest in conjunction with the Forest Research Institute. It was opened in May 1938.

INDIAN FOREST COLLEGE

The Indian Forest College is housed in the Forest Research Institute building at New Forest and is well equipped with lecture rooms, engineering drawing rooms, biological laboratories and workshops and the Central Library of the Forest Research Institute form an important part of the College in so far as they are largely used for educational purposes by the Research Officers and College staff and students. Hostel accommodation and a common mess are provided. A large playing field with a pavilion provides football and hockey grounds, a cricket pitch, tennis courts, and a squash court, and the mess has billiards and other indoor games.

The course covers three years, and among other conditions a science degree not lower than Second Class, is required as a qualification for entry. Only those students are accepted who are deputed by their States in accordance with College rules.

Admissions are made in October of each year and are usually limited to 70 students in any course.

The total cost of three years is as under :—

Details of Items	Amount payable for last two years		Amount payable during the third year
	State Governments	Foreign	
	Rs.	Rs.	
Tuition fees.	(1) 7,000	(2) 1,000	(1) None from State Governments. (2) Rs. 500 from foreign students.
Stipends	3,600	6,000	Pay as in State services.
Expenses on tour.	1,600	1,600	Travelling Allowance at State rates.
Equipment allowance.	1,250	1,250	
Caution money.	100	100	
	<hr/>	<hr/>	
Total	13,550	9,950	

Provision also exists for the admission of students sponsored by foreign countries. Foreign candidates should conform to the educational and physical standards prescribed for Indian candidates.

The college fees for foreign students are Rs. 500 per annum and stipend Rs. 250 per month.

Five seats are reserved for candidates from South East Asian countries under the Expanded Technical Assistance Programme of the Food & Agriculture Organisation of the U.N.O.

NORTHERN FOREST RANGERS COLLEGE

The Northern Forest Rangers College (formerly known as the Forest School and the Imperial Forest College) is housed partly in the original college buildings at Dehra Dun and partly in new buildings at New Forest. Lecture rooms, engineering halls, biological laboratories and museums besides hostels and messes for the students are available. The surrounding grounds in Dehra Dun, covering about four acres constitute a small arboretum and include tennis-courts, while in addition there is a good playing field adjacent.

The course covers two years. Among other conditions, the minimum qualification for admission to the College is a pass in the Intermediate examination of an Indian University or its equivalent, but the usual standard is higher. Only those students are accepted who are deputed by their States. Arrangements exist at Dehra Dun for admitting upto 72 students each year. The course commences from 1st October each year.

The total cost of two years is as follows :—

<i>Details of items</i>	<i>State Governments</i>	<i>Foreign</i>
Tuition fee.	Rs. 3,000	Rs. 400
Stipend.	Rs. 1,800	Rs. 3,600
Expenses on tour.	Rs. 800	Rs. 800
Caution money.	Rs. 100	Rs. 100
Cost of equipment allowance.	Rs. 950	Rs. 950
	<hr/>	<hr/>
Total	Rs. 6,650	Rs. 5,850
	<hr/>	<hr/>

For foreign students the tuition fee is Rs. 200 per annum.

SOUTHERN FOREST RANGERS COLLEGE

This college is located in Coimbatore. It was previously administered by the Madras Government for the training of forest rangers, but was taken over by the Government of India in July, 1948, and expanded to function as a second centre (identically on the same lines as the Forest Colleges at Dehra Dun) for the training of forest rangers. The college can admit upto 72 students in the Rangers' course each year. The course commences on the 1st July each year.

A Regional School for the training of Foresters for the South Indian region has also been established at Coimbatore from 1st July, 1952, under the Forest Research Institute and Colleges. The course is of one year's duration.

The fees as at present fixed are Rs. 800 per year, and the total cost of the course is about Rs. 1,750 as follows :—

(a) Tuition fee,	Rs. 800
(b) Stipend at Rs. 60 p.m.	Rs. 600
(c) Travelling Allowance.	Rs. 200
(d) Equipment,	Rs. 150
	<hr/>
Total	Rs. 1,750
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ENQUIRIES

All enquiries concerning the Forest Research Institute and Colleges, Dehra Dun, or the Southern Forest Rangers College, Coimbatore, may be addressed to the President, Forest Research Institute and Colleges, New Forest P.O. (Dehra Dun), Uttar Pradesh.

STAFF

Direction :—

Sri R. N. Datta, B.A. (Oxon), M.Sc. (All.), I.F.S., President, Forest Research Institute and Colleges.

Sri P. D. Stracey, M.A., I.F.S., Director of Forest Education.

Dr. D. Narayanamurti, M.Sc., A.I.I.Sc., F.R.I.C., F.Inst.P., M.I.Chem.E., Dr. Ing., F.N.I., Personal Assistant to the President, Forest Research Institute and Colleges.

Sri I. J. Malhan, B.A., Registrar, Forest Research Institute and Colleges

Heads of Divisions, Research Branches and Forest Colleges :—

Dr. D. Narayanamurti, M.Sc., A.I.I.Sc., F.R.I.C., F.Inst.P., M.I.Chem.E., Dr. Ing., F.N.I., Head, Division of Mechanical Technology, and Officer-in-Charge, Composite Wood Branch.

Sri N. J. Masani, B.E. (Civil), A.M.I.E. (India), Chartered Engineer, Lecturer in Engineering and Surveying, Indian Forest College, and Officer-in-Charge, Timber Engineering Branch.

- Sri A. C. Sekhar, M.Sc., Officer-in-Charge, Timber Mechanics Branch.
- Sri M. A. Rehman, M.Sc., A.R.I., Head, Division of Seasoning and Preservation, and Officer-in-Charge, Wood Seasoning Branch.
- Dr. A. Purushotham, M.Sc., D.Sc., Officer-in-Charge, Wood Preservation Branch.
- Sri R. L. Badhwar, M.Sc., Head, Division of Chemical Technology, and Officer-in-Charge, Minor Forest Products Branch.
- Dr. R. V. Bhat, M.Sc. (Tech.), Ph.D. (Bombay), Ph.D. (Mench.), A.R.I.C., A.T.I., Officer-in-Charge, Cellulose & Paper Branch.
- Dr. P. S. Rao, D.Sc., F.A.Sc., Officer-in-Charge, Chemistry of Forest Products Branch.
- Dr. R. N. Mathur, M.Sc., Ph.D., F.E.S.I., F.R.E.S., Head, Division of Forest Protection, and Officer-in-Charge, Entomology Branch.
- Dr. B. K. Bakshi, M.Sc. (Gold Medalist) (Cal.), Ph.D. (Edin.), Officer-in-Charge, Forest Pathology Branch.
- Sri S. K. Seth, M.Sc., A.I.F.C., Head, Division of Forestry, and Silviculturist.
- Sri Niranjan Singh, B.Sc. (Agri.), A.I.F.C., Officer-in-Charge, Logging Branch.
- Sri M. B. Raizada, M.Sc., Head, Division of Forest Botany, and Officer-in-Charge, Botany Branch.
- Sri S. S. Ghosh, M.Sc., Officer-in-Charge, Wood Anatomy Branch.
- Dr. K. R. Nair, M.A., M.Sc., Ph.D. (London), F.S.S., F.A.S.A., Officer-in-Charge, Statistical Branch.
- Sri S. P. Sahi, Publicity and Liaison Officer.
- Sri P. S. Shivaram, B.E. (M. & E.), Officer-in-Charge, Service Branch.
- Dr. M. N. Ramaswamy, M.Sc., D.Sc. (Munich), F.A.Sc., Officer-in-Charge, Forest Research Laboratory, Bangalore.
- Sri Y. M. L. Sharma, M.Sc., A.I.F.C., Dean, Indian Forest College.
- Dr. S. Krishnaswami, B.Sc., M.Sc. (Cal.), A.I.F.C., Doctor of Forestry (Yale, U.S.A.), Principal, Northern Forest Rangers College.
- Dr. D. A. Rama Rao, B.Sc., A.I.F.C., Ph.D., Principal, Southern Forest Rangers College.

Statement showing tuition fee recoverable from the deputing authorities of the students both of the colleges for the duration of full course as required in (4) of the letter.

1955-58 SUPERIOR FOREST SERVICE COURSE

<i>No. of Foreign students</i>	<i>Other than Foreign students</i>	<i>Rate of tuition fee</i>	<i>Amount Realised</i>
2	—	One student @ Rs. 500 p.a. for 3 years.	1,500
		One student @ Rs. 3,500 p.a. for 1 year and @ Rs. 500 p.a. for 2 years as he was selected under Colombo Plan during the 2nd year of his training.	4,500
—	34	@ Rs. 3,500 p.a. for 2 years.	2,38,000

1956-59 SUPERIOR FOREST SERVICE COURSE

4	—	Three students @ Rs. 500 p.a. for 3 years.	4,500
		One student @ Rs. 500 p.a. for 1 year as he left the College during the 2nd year of his training.	500
—	68	@ Rs. 3,500 p.a. for 2 years.	4,76,000

1957-60 SUPERIOR FOREST SERVICE COURSE

4	—	@ Rs. 500 p.a. for 3 years.	6,000
—	59	@ Rs. 3,500 p.a. for 2 years.	4,13,000

1956-58 RANGERS COURSE

2	—	One student @ Rs. 200 p.a. for 2 years.	400
		One student @ Rs. 200 p.a. for 1 year as he left the College during the 2nd year of his training.	200
—	74	73 students @ Rs. 1,500 p.a. for 2 years.	2,19,000
		1 student @ Rs. 1,500 p.a. for ½ year, as he was permitted to join the 1956-59 Superior Forest Service Course.	750

1957-59 RANGERS COURSE

5	—	@ Rs. 200 p.a. for 2 years.	2,000
—	65	@ Rs. 1,500 p.a. for 2 years.	1,95,000

HARCOURT BUTLER TECHNOLOGICAL INSTITUTE, KANPUR, U. P.

STAFF

<i>Principal.</i>	Dr. H. Trivedi, M Sc. (Hons.), D Sc. (Alld.), D.Met. (Sheffield).
<i>Head of the Oil Chemistry and Technology Section and Oil Ex- pert to Government, U.P.</i>	Sri Om Prakash, B.Sc., Dip Tech., A R I.C., M I I.Chem.E.
<i>Head of the General Research and Chemical Technology Section and Industrial Chemist to Govern- ment, U.P.</i>	Dr. J. B. Lal, D Sc., B S E. (Chem. Engg.), M S.E. (Mich.), A.R.I.C., M.C.I.C , M I I Chem.E.
<i>Alcohol Technologist to Govern- ment, U.P.</i>	(Vacant).
<i>Head of Chemical Engineering Section.</i>	(Vacant).
<i>Assistant Professor of Engineering.</i>	(Vacant).
<i>Assistant Professor of Oil Chemistry and Technology.</i>	1. Sri Atma Ram, B.Sc., F.H.B.T.I. 2. Sri A. C. Gupta, B.Sc., F.H.B.T.I.
<i>Assistant Professor of Physical Chemistry and High Polymers.</i>	Dr. M. S. Bhatnagar, M.Sc., Ph.D.
<i>Research Chemists.</i>	1. Sri G. N. Gupta, B.Sc., F.H.B.T.I. 2. Sri T. R. Sharma, B.Sc., F.H.B.T.I. 3. Sri S. N. Kapoor, B.Sc., F.H.B.T.I.
<i>Assistant Alcohol Technologist.</i>	Sri W. R. Damle, M.Sc.
<i>Workshop Superintendent.</i>	(Vacant).

Besides the above, there are a number of Research Assistants, Technical Assistants and ministerial staff.

ADVISORY COMMITTEE

There is an Advisory Committee appointed triennially by the State Government to advise the Government from time to time on the working of the Institute. It is constituted as under :

- | | |
|---|--------------------------------|
| (1) Director of Industries, U.P., | <i>Chairman.</i> |
| (2) Deputy Director of Industries (Education), | |
| (3) The Economic Botanist to Government, U.P., | } <i>Members.</i> |
| (4) Director, Indian Institute of Sugar Technology, Kanpur, | |
| (5) One nominee of State Government, | |
| (6) One nominee each of the Allahabad, Banaras and Agra Universities, | |
| (7) Two nominees of the State Assembly, | |
| (8) One nominee of Chambers of Commerce, Kanpur, | |
| (9) One nominee of U.P. Advisory Committee on Heavy Industries. | |
| (10-13) Some Industrialists of Kanpur, | |
| (14) Principal, Harcourt Butler Technological Institute, Kanpur, or as long as Deputy Director of Industries (Education) is also the Principal of the Institute, Senior Head of one of the sections of the Institute, | } <i>Member and Secretary.</i> |

The function of the Committee is to advise the Government on all new expenditure in respect of any single item exceeding Rs. 2,000 non-recurring or Rs. 300 per annum recurring and to make constructive suggestions and examine proposals made before submission to Government. The Committee also has power to set up sub-committees and co-opt members or to authorise sub-committees to co-opt members. The members of the Committee have the power to initiate proposals, but matters of internal discipline affecting the staff or the students and questions of individual appointments are not within the purview of the Committee.

There is a sub-committee of the Advisory Committee consisting of :

- | | |
|---|-------------------|
| (1) Director of Industries, U.P., | <i>Chairman.</i> |
| (2) Deputy Director of Industries (Education), | |
| (3) Principal, H. B. Tech. Inst., | } <i>Members.</i> |
| (4) Heads of the different sections of the Institute, | |
| (5) One representative of the Chambers of Commerce on the Advisory Committee to be elected by the Advisory Committee, and | |
| (6) Three representatives of the Universities on the Advisory Committee, | |

The functions of the sub-committee are :

- (a) To exercise general academic control and lay down the curriculum and courses.
- (b) To decide :
 - (i) What researches should be carried out without charge for the industrial development.
 - (ii) Which request for work should be granted.
 - (iii) In what order or priority various problems awaiting solution should be dealt with, and
 - (iv) What fees should be charged.
- (c) To draw up a working programme for research work, and
- (d) To keep the Institute in touch with the research requirements of the commercial community.

GENERAL INFORMATION

Introduction.

The Harcourt Butler Technological Institute, so named after Sir Spencer Harcourt Butler, K.C.S.I., C.I.E., the then Governor of Uttar Pradesh, was established in 1921 as an institution for technological training and research. It is the only institution of its kind materializing as a result of the recommendations of the Indian Industrial (Holland) Commission. Since its inception its working has been reviewed by inquiry committees appointed by the Uttar Pradesh Government, one in 1928-29 and the other in 1931-32, and improvements have been effected with. However, its main objectives have remained unaltered. It is an institution where technological research is conducted with a view to promoting the industrial development of Uttar Pradesh in particular and India in general, and where technologists are trained to qualify for occupying positions on the supervisory staff of different industries or to start their own industries. Courses for higher training in methods of industrial and technological research are also provided. Short-term courses are also available for the benefit of those who wish to receive scientific training for short periods in particular branches of selected industries.

The Institute consists of the following sections :

- (1) General Research and Chemical Technology.
- (2) Oil Chemistry and Technology.
- (3) Chemical Engineering.
- (4) Applied Microbiology.

The section of Applied Microbiology will admit students from July, 1958. The sanction for budget has been received, the Laboratories and workshops are under construction and the equipment is to be purchased. There is a Central Control Laboratory (Excise) under the Alcohol

Technologist. This has also been transferred to the Institute from the 1st February, 1954. The Administrative control has now been transferred from the Excise Department to the Industries Department. It will ultimately form a part of Applied Microbiology section.

Sugar Technology which formed a section of this Institute till 1936 was taken over by the Government of India and developed into what is now the Indian Institute of Sugar Technology, Kanpur. The prospectus and application form for admission to that Institute can be had from the Director of that Institute. 20 per cent of the seats in each of the courses of studies provided in that Institute are reserved for residents of U.P. for which two studentships of Rs. 25 each are awarded by the U.P. Government through the Principal, Harcourt Butler Technological Institute, Kanpur.

Buildings.

The Institute is housed in a building constructed at a cost of about Rs. 4,50,000 exclusive of the cost of site. It is situated in very healthy surroundings in Agricultural Gardens, Nawab Ganj, Kanpur, near the Government Agricultural College. The Indian Institute of Sugar Technology is also temporarily housed in the same building. The laboratory of the Glass Technologist to Government, U.P., and the Central Control Laboratory of the Directorate of Marketing and Inspection, Ministry of Food and Agriculture, Government of India are also situated in the same building. Extensions in this building have been made to accommodate the new section of Chemical Engineering and further extensions are under contemplation for the proposed section of Applied Microbiology.

The general workshop, soap, and paint factory and hostels are accommodated in separate buildings. New buildings for Oil Mill, Chemical Engineering and Mechanical Engineering workshop, etc., have been constructed and the equipment has also been fitted. The oil mill has also been erected and is regularly working.

Equipment.

General Research and Chemical Technology Section.

(1) There are up-to-date laboratories for applied chemical research, for training of students and for technical analysis.

(2) There is a workshop consisting of semi-large scale demonstration and experimental plants including vacuum evaporators, driers, steam-jacketed pans, drug extractor, autoclave, rectifying still, filter-presses, pulveriser, ball mills, disintegrators, centrifuge, furnaces and pumps of various types.

(3) There are semi-commercial plants for steam distillation of essential oil.

Oil Chemistry and Technology Section.

(1) There are up-to-date laboratories equipped for research work, for the training of students and for technical analysis and testing of oils, fats, waxes, soaps, paints, varnishes and other applied products and raw materials.

(2) The following plants are provided for the practical training of students and for industrial research :

An oil mill consisting of hydraulic presses, expellers, and preparatory machines such as seed cleaning, decorticating and pulverising machines. There is also a complete equipment for delinting, decorticating and crushing of cotton-seed.

A small oil refinery consisting of neutralising, bleaching and deodorising equipment.

A two ton soap boiling plant and a 1 Cwt. toilet soap plant.

A small plant for the manufacture of boiled linseed oil and varnishes.

A 2 Cwt. paint mill consisting of an edge-runner mill, pug mill, triple roller mill, cone mill, microtwin roller mill and a ready mixer.

A stand oil and ester gum plant of $\frac{1}{2}$ ton capacity.

A solvent extraction plant of 5 gallons capacity.

(3) There is a workshop for training and research in Cottage Oil Industry.

Chemical Engineering Section.

(1) There are Chemical laboratories for testing and analysis.

(2) An up-to-date Chemical Engineering Workshop is provided.

(3) There is a Chemical Technology Workshop consisting of semi-large scale plants common with the section of General Research and Chemical Technology.

Applied Microbiology Section.

There is an up-to-date laboratory for research and testing, and more machinery, equipment have been purchased.

Mechanical and Electrical Engineering Workshop.

There is a workshop common to all sections consisting of lathes, drills, polishing wheels, etc., for preparing experimental apparatus and doing minor repair work. There is another workshop for the training of students in workshop practice. Various bays for the Chemical Engineering, Oil Technology, Chemical Technology and Applied Microbiology have been constructed and fitted up.

Library.

The Institute possesses a comprehensive library which contains a large number of books on Science, Technology and various other subjects. It maintains a complete file of Indian patent specifications. Latest books and literature on technical and other subjects are added every year. A large number of scientific journals and periodicals are also subscribed. The library is also open to the public.

Central Control Laboratories.

The Central Control Laboratories of Government of India in connection with Agmark grading under the Directorate of Marketing and Inspection are also situated in the Institute premises and are working under the Oil Export to Government, U.P.

U.P. Government Glass Technologist's Laboratories.

The U.P. Government Glass Technologist's Laboratories are also situated in the Institute buildings and they are carrying on research work on Silicate Industries, problems on glass, ceramics, enamels, etc.

COURSES OF STUDY

The different courses of study available at the Institute with their necessary particulars are given below :

A—Fellowship of the Institute (F. H. B. T. I.) in—

- (i) Oil Chemistry and Technology,
- (ii) General Research and Chemical Technology, and
- (iii) Chemical Engineering.

The number of seats available in these courses are three, two and one respectively and are open for admission to the Associateship Diploma holders of the Institute in the respective subjects. The duration of the courses is two academic sessions during which a student is required to devote himself to research work under the guidance of professors and to submit a thesis at the end of the course for the award of Fellowship.

B—Associateship of the Institute (A. H. B. T. I.) in—

- (i) Oil Chemistry and Technology.
- (ii) General Research and Chemical Technology, and
- (iii) Chemical Engineering.

The number of seats available in these courses are 16, 12 and 8 respectively and are open in case of (i) and (ii) to graduates in Science with Chemistry as one of the main subjects, and in case of (iii) to graduates in Science with Chemistry, Physics and Mathematics. In the case of (i) and (ii) also preference is given to graduates in Science with Chemistry, Physics and Mathematics. The duration of these courses is two academic sessions and the training consists of lec-

tures, laboratory practical work, machine drawing, workshop practice and visits to factories, etc. Instructional tours to visit important factories throughout India are also arranged. At the end of the two years training at the Institute, the students are required to undergo factory training for 3 months.

NOTE: From the next session it is proposed to start a four year course on the pattern of the Government of India Syllabus for Chemical Engineering. The Admission qualification would be Inter Science in Physics, Chemistry, and Mathematics.

The syllabus prescribed for the courses is very comprehensive and the standard laid down is high.

C—Short Courses—

The following short courses are provided—

In Oil Chemistry and Technology Section :

- (i) Oil Milling,
- (ii) Soap Manufacture,
- (iii) Paints and Varnishes, and

In General Research and Chemical Technology Section

- (iv) Essential oils and synthetic aromatics.

The minimum qualification for admission to these courses is B.Sc. degree in Science or Agriculture with Chemistry as one of the main subjects. The duration of courses is 8—10 months in one session and the training consists of lectures, laboratory practical work and visits to factories, etc.

D—Ph.D. of Agra University—

The Institute is recognized by the Agra University for guiding students, who have taken M.Sc. degree of the Agra University, in research work leading to Ph.D. degree of the University in Chemistry in two Sections, viz. (i) Oil Chemistry and Technology and (ii) General Research and Chemical Technology.

OTHER INFORMATION RELATING TO THE COURSES

Academic Session

The Academic session of the Institute for regular studies commences on the 10th July and ends on the 14th May each year.

Admission

Applications for admission should be made on the prescribed form available on request from the office of the Principal of the Institute and should reach complete in every respect by the 20th June or any other date fixed for the purpose. Incomplete applications are liable to be rejected. A Treasury chalan receipt of Re. 1 as registration fee

(which is non-refundable) duly deposited in Uttar Pradesh Government (Head of account : XXXII—Industries—Miscellaneous receipts). should be sent along with the application.

Preference is given to students who have definite prospects of employment in industrial concerns and applicants are advised to submit evidence of definite offers or prospects of employment on completion of their course.

Selection of candidates

The selection of candidates for admission to the different courses is made by a Selection Board on the basis of written tests in general knowledge, science and intelligence aptitude. The candidates are also required to appear before the Selection Board at the Institute for which the Institute does not defray any travelling or other expenses.

If any statement made in the application form is found to contain wilful misrepresentation, the Principal may remove the student's name from the register of the Institute at any time.

Tuition and other fees

No tuition fee is charged, but the following fees have to be paid during each session—

	Rs.
(1) Caution Money Deposit ..	50
(2) Scientific Society Subscription ..	15
(3) Games fee ..	10
(4) Subscription for social functions ..	5
(5) Hostel Fee from hostellers only ..	36
(6) Common room fee from hostellers only ..	12
(7) Alumni fee for Old Boys' Association * ..	16
Total ..	144

* Charged only once from every student generally in the 2nd year.

These fees are payable in advance. In the first year they are to be deposited just after the selection of the candidates for admission and are non-refundable except the caution money deposit, which is returnable after deduction of the amount of breakages or loss of any apparatus, etc. Any student who fails to deposit the fees on the date fixed for the purpose after his selection for admission will forfeit his claim for admission.

Scholarship

In the Oil Chemistry and Technology Section two scholarships of Rs. 25 per month each are awarded every year by the Head of the Section to Diploma Course students on the result of the first terminal

examination for the first year and on the result of 1st year annual examination for the second year. In each of the General Research and Chemical Technology and Chemical Engineering Sections there is one Scholarship of Rs. 25 per month which is awarded by the Sub-Committee of Studies and Research on the recommendation of the Heads of the Sections.

Two Scholarships of Rs. 150 per month each i.e. one in the Oil Section and the other in the General Research Section are available every year on the result of the Diploma Examination to the students who take up the post-diploma course. The tenure of Scholarships depends on the satisfactory progress of work and good conduct.

Hostel Accommodation

There are hostels attached to the Institute which provide accommodation for about 115 students. The usual monthly expenses of a student amount to about Rs. 80.

Attendance

A student must put in an attendance of at least 75 per cent of the total number of working days during each session. Non-compliance with which may render his promotion or the award of Diploma or Certificate at the end of the course liable to be withheld.

General Conduct of students

A conduct register is kept by the Principal, in which offences like disobedience of orders, absence without leave, idleness, insubordination or disrespect are recorded.

The name of any student may be removed temporarily or permanently from the Institute books for habitual or gross misconduct, continued idleness, or neglect of work or numerous or frequent adverse entries in the conduct register.

Full discretion rests with the Principal to remove any student, who appears unlikely to profit by training or whose progress is unsatisfactory. A removal under this sub-rule will imply no reflection on the student's character.

Rules for the maintenance of discipline in the Institute and hostels have to be observed by all students.

Breakage and damage

Students are charged for apparatus which they break or damage at the option of the Principal, these charges may be reduced if apparatus of considerable value is broken or damaged accidentally.

Holidays

The Institute observes all the gazetted holidays as declared by the Uttar Pradesh Government and also the holidays observed by the Educational Institutions under Industries Department, Uttar Pradesh.

DIPLOMAS AND CERTIFICATES

Fellowship Diploma (F. H. B. T. I.)

The Fellowship Course is intended for students, who possess the requisite qualification, as prescribed. The Fellowship Diploma is obtained by research work carried out under the guidance of the research staff of the Institute, on problems which have a bearing on any of the courses in which studies are conducted at the Institute.

After a student has been admitted to this course, he is required to prepare an outline of the problem, which he proposes to take up for investigation and submit it to the Head of the Section for approval. He is required to attend the laboratories regularly and proceed with his work under the guidance of the research staff with whom he is attached. He shall not absent himself from the laboratories without adequate reasons and submit applications for leave through the Head of the Section in which he is working.

On completion of his term at the Institute, the student is required to submit two typed copies of the thesis embodying the results of his investigations. This thesis is to be submitted by the 1st of July, or any subsequent date fixed for the purpose. The thesis is examined by an external examiner appointed for the purpose, and the Head of the Section in which the work has been carried out as the internal examiner. After the receipt of favourable recommendations from the examiners, the award of the Diploma to the candidate is announced. Any student failing to qualify for the Diploma in the first attempt, may be allowed to continue his work at the Institute and submit a fresh thesis subsequently.

A thesis submitted by a student is the property of the Institute but may be allowed to be published after the award of the Diploma. Publication of any part of the thesis before award of the Diploma may disqualify a student for the award of the Diploma on the same thesis.

A member of the staff of the Institute, who is an Associate of the Institute (A. H. B. T. I.) may be allowed to submit a thesis for award of Fellowship Diploma in the subject in which he has taken the Associateship provided he has been in the service of the Institute for at least 3 years and has carried out sufficient amount of research work during this period either independently or under the direction of one of the Research Officers of the Institute for his thesis apart from his official duties.

A student, who is awarded Fellowship Diploma is entitled to call himself a FELLOW OF THE HARCOURT BUTLER TECHNOLOGICAL INSTITUTE (F. H. B. T. I.) in that particular subject.

Associate Diploma (A. H. B. T. I.)

A student who passes the two years' Associateship Diploma Course in either of the subjects (i) Oil Chemistry and Technology, (ii) General Research and Chemical Technology and (iii) Chemical Engineering, is awarded the Associateship Diploma and is entitled to call himself an ASSOCIATE OF THE HARCOURT BUTLER TECHNOLOGICAL INSTITUTE (A. H. B. T. I.) in that subject.

Certificate

A student who completes a short-term course and passes the examination held at the end of the course is awarded a certificate in the subject in which he took the training.

OTHER ACTIVITIES

(v) Council of Students' Activities

There is a Council of Students' Activities which organises various activities of the students, such as, sports Scientific Society, Annual Convocation, etc. It consists of members of staff and students.

(ii) Sports

In order to fit them for the active duties of an industrial career, the students are required to take part in outdoor games. Facilities are provided for different games such as tennis, cricket, football, hockey, badminton, basket-ball, volley-ball, table-tennis, gymnastics and boating. Indoor games are also provided. Membership of Technologists' Sports Club which organises and conducts these activities is compulsory for every student for which the fee is Rs. 10 per session.

(iii) Scientific society

The Scientific Society of the Institute is run mainly by the students with the help and guidance of the members of the staff. Meetings are held at which papers are read, which relate to problems on which research work is in progress at the Institute or to intensive study of technical subjects or topics of general industrial importance. Distinguished scientists are also invited to deliver addresses under the auspices of the Society. A Journal containing articles dealing with the researches carried out at the Institute and other matters of general and industrial interest are published by the Society, which is supplied free to the members. Membership of the Society is compulsory for every student, the fee being Rs. 15 per session.

(iv) Annual Convocations

An Annual Convocation of the Institute is held every year sometimes nearabout the month of October, in which the various Diplomas, Certificates and Prizes are awarded to successful students and which

is attended by important persons including scientists, industrialists, educationalists, public men and officials etc. The function is organised by a Convocation Committee consisting of members of the staff and students. The occasion is marked by various other activities such as the Annual Convocations of the Oil Technologists' Association and the Sugar Technologists' Association, the meetings of the Scientific Society, various competitions in games and debates and the meetings of the Old Boy's Association, and these activities continue for full one week or so.

(v) Educational Tours

Besides frequent visits to local factories and industrial works throughout the course of their studies, the students are taken out on an All India Educational Tour every year to visit important factories, industrial and technical institutions and Research Laboratories in order to broaden their outlook and make them acquainted with the various industrial and research activities in the country.

INDIAN AGRICULTURAL RESEARCH INSTITUTE, NEW DELHI

The Indian Agricultural Research Institute which was originally established at Pusa (Bihar) partly out of the donation of an American Philanthropist, Mr. Henry Phipps, was transferred in 1936 to its present home in New Delhi following the great Earthquake of Bihar in January, 1934 which completely wrecked the main building of the Institute.

The Institute is under the administrative control of the Director and is fully equipped with laboratories, museums, herbaria, and an up-to-date scientific library. The activities of the Institute are mainly directed towards research and training which are carried out through seven Divisions at present, viz., (1) Agronomy, (2) Agricultural Engineering, (3) Botany, (4) Soil Science and Agricultural Chemistry, (5) Mycology and Plant Pathology, (6) Entomology, and (7) Horticulture.

The Institute has at present the following sub-stations:—

- | | |
|---|---|
| 1. Karnal (in East Punjab) for Agronomic Experiments. | |
| 2. Simla for Wheat Rust work and for Virus Research. | |
| 3. Pusa | } for Wheat Rust work. |
| 4. Indore | |
| 5. Wellington (S. India) | |
| 6. Poona for Virus Research. | |
| 7. Katrain (Kulu Valley) for Vegetable Breeding. | |
| 8. Bhowali | |
| 9. Kalimpong (Assam) for Virus Research. | |
| 10. Bangalore | } for Soil Survey and Correlation work. |
| 11. Poona | |
| 12. Kharagpur | |

As regards research, the Institute deals with problems of general or All-India importance, and with problems which cannot be studied properly or conveniently by State Departments. Facilities are provided to a limited number of research workers to carry out definite pieces of research within the purview of the activities of the Institute. The Institute has already won international reputation as a centre of advanced training and research in various branches of Agricultural Science by its record of achievements in evolving the world famous N. P. Wheats, Co. Canes and other improved varieties of crops which have established complete supremacy all over the country by ousting the local varieties previously grown. Evolving high-yielding and disease-resistant strains of crop plants, and methods of saving crops from the ravages of diseases and pests, producing improved agricultural

implements suitable for the country as a whole and improved methods of crop planning and fertilizer use are some of the major items of work that are in progress. Under the National Second Five Year Plan the more important items of work that have been taken up are (1) Use of radio-active isotopes in Agricultural research, (2) Seed Testing and Plant Introduction Services, (3) All India Soil Survey, (4) Cartographic work for Soil Mapping, and (5) A co-ordinated Scheme for maize breeding.

On the educational side, it serves the purpose of a higher teaching institution, providing two-year post-graduate courses for selected graduates of State Agricultural Colleges and distinguished science graduates of Indian Universities. Foreign scholars are also benefitted by this training. These specialised post-graduate courses were started in November 1923 with the object of training students in methods of research and fitting them for appointment to the superior posts in the services. A tuition fee of Rs. 25 per mensem is charged from students, who are provided with residential accommodation in the Hostels (A separate charge of Rs. 5 per mensem is made for electricity and water). Students who successfully complete the two-year course are awarded the Diploma of Associateship of the Indian Agricultural Research Institute under three classes, viz., First, Second and Third, on the basis of the marks obtained at the theoretical and practical examinations and on the thesis. The Institute has been recognised by most of the Universities in India for presentation of thesis for their higher research Degrees. The Institute also holds short courses in:—

1. The Use of Radio-isotopes in Agriculture
2. Soil Survey
3. Agronomy

and also in other subjects allied to Agriculture as and when the need arises.

The Institute performs another very important function in so far as it supplies information and advice on Agricultural topics to all who ask for it.

The Central College of Agriculture, which runs a 3-year course leading to the B.Sc. (Hons.) Agr. degree of the Delhi University, has been integrated with this Institute since July 1951.

Both the I.A.R.I. and the Central College of Agriculture are wholly financed by the Central Government.

Five Golden Jubilee scholarships of Rs. 50 per mensem each are available to the second year post-graduate students who stand first in the First Year Final Examination in each of the Divisions imparting post-graduate training. Copies of the prospectus complete with all relevant information, syllabii of studies and the prescribed application form for admission can be had of the Manager of Publications, Civil Line, Delhi-8, at a price of As. 10 per copy.

LIST OF ALL CLASS I OFFICERS OF THE INSTITUTE

Director :

Dr. B. P. Pal, M.Sc., Ph.D. (Cantab), F.L.S., F.B.S., F.N.I.,
Hony. Member, Genetic Society, Japan.

Joint Director and Head of Division of Mycology :

Dr. R. S. Vasudeva, Ph.D. (Lond.), D.Sc. (Lond.), D.I.C., F.N.I.

Principal C. C. A. and Head of the Division of Entomology :

Dr. E. S. Narayanan, M.A., Ph.D., D.I.C., F.R.E.S., F.E.S.I.

Head of Division of Chemistry :

Dr. S. P. Raychaudhury, Ph.D., D.Sc. (Lond.) & (Cal.).

Head of Division of Botany :

Dr. H. S. Sikka, M.Sc., Ph.D.

Head of Division of Agronomy :

Dr. P. C. Raheja, M.Sc., Ph.D., D.Sc.

Head of Division of Agril. Eng. :

Shri E. G. K. Rao, B.Sc. (Engg.) (Mech., Elec.), A.M.I.E. (India).

Special Officer :

Dr. R. V. Tamhane, B.Ag., Ph.D. (Lond.).

Senior Physicist :

Dr. C. Dakshinamurti, M.Sc. Ph.D. (Lond.), D.Sc. (Banaras).

Agronomists :

Shri S. Sen, M.Sc.

Shri A. R. Khan, B.Sc. (Ag.), M.Sc. (Wiscon.).

Dr. J. N. Sharma, Ph.D.

Dr. R. D. Verma, Ph.D.

Dr. Singh Mukhtar, Ph.D.

Statistician :

Dr. P. N. Saxena, M.A., Ph.D.

Plant Physiologist :

Dr. R. D. Asana, M.Sc., Ph.D., D.I.C.

Geneticist :

Dr. A. B. Joshi, M.Sc., Ph.D., Assoc. I.A.R.I.

Cytogeneticist :

Dr. M. S. Swaminathan, B.Sc., B.Sc. (Ag.), Ph.D. (Cantab), Assoc.
I.A.R.I.

Wheat Breeder :

Dr. G. S. Murti, M.Sc., Ph.D., Assoc. I.A.R.I.

Plant Introduction Officer :

Shri H. B. Singh, M.Sc., Assoc. I.A.R.I.

Maize Breeder :

Dr. N. L. Dhawan, M.Sc., Ph.D.

Horticulturist :

Dr. G. S. Randhawa, M.Sc., Ph.D.

Geneticist :

Shri T. B. Deshpande, M Sc , Assoc. I.A.R.I.

Vegetable Breeder :

Dr. B. Chowdhury, Ph D. (Malb.), F R.H S.

Geneticist :

Dr. S. P. Kahli, M Sc , Ph D

Biochemist :

Dr. N. B. Das, M Sc , Ph D.

Organic Chemist :

Dr. K. C. Gulati, B Sc. (Hons, Tech.), M Sc (Hons.), Ph D.

Experimental Physicist :

Dr. Y. V. Kathavate, M Sc , Ph D

Soil Scientist :

Dr. N. P. Datta, M Sc., Ph D.

Soil Correlators :

Dr. S. V. Govindarajan, B Sc. (Hons.), Ph.D. (Lond.), D.I.C.
A.R.I.S.

Dr. B. B. Roy, M.Sc., Ph.D.

Shri S. Digar, M Sc , Dip Agr (Cal.).

Physical Chemist :

Dr. B. Ramamoorthy, M.Sc., A R I (Lond.), Assoc. I A.R.I.

Cartographer :

Shri L. M. Mathur, M.A., B.T., A.S.T.

Microbiologist :

Dr. W. B. V. Sundrarao, B Sc. (Hons.), Ph D., Assoc. I.A.R.I.

Chemist

Dr. Krishna Rao, M.Sc., Ph D., A.I.I.Sc.

Systematic Entomologist :

Dr. M. G. Ramdas Menon, M.Sc., Ph.D.

Insect Ecologist :

Dr. S. Pradhan, B.Sc. (Hons.), M.Sc., Ph.D. (Lond.), D.Sc
F.R.E.S., F.E.S.I.

Insect Physiologist :

Dr. N. C. Pant, M Sc. (Ag.), Ph.D. (Lond.).

Entomologist :

Dr. Rattan Lal, M.Sc., Ph.D.

Mycologists :

Dr. B. L. Chona, B.Sc., Ph.D. (Lond.), D.Sc.

Dr. R. Prasad, M.Sc., D.Sc. (Agr.).

Plant Bacteriologist :

Dr. M. K. Hingorani, B.Sc. (Ag.), Ph.D. (Minn.), Assoc. I.A.R.I.

Virus Pathologist :

Dr. S. P. Raychaudhuri, M.Sc., D.Phil. (Cal.), F.L.S., Assoc.
I.A.R.I.

Mycologist :

Shri R. L. Munjal, M.Sc.

Virus Entomologist :

Shri P. M. Verma, M.Sc.

Virus Pathologist :

Dr. S. P. Capoor, M.Sc., Ph.D.

Plant Pathologist :

Dr. D. Suryanarayan, M.Sc., Ph.D.

Mech. Engineer :

Shri R. R. Budola, B.Sc. (Agri. Engg.).

INDIAN INSTITUTE OF PHILOSOPHY, AMALNER, EAST KHANDESH

The Indian Institute of Philosophy is a Research Institute. It was founded in 1916 by Seth Motilal Maneckchand, alias Pratapseth, of Amalner, with the help of his friend Seth Vallabhdas of Yeola.

Its object is to encourage persons who have already studied Western Philosophy to get a first-hand acquaintance with Indian thought in general, and with the Advaitic system of Vedanta in particular.

The Institute has quite an up-to-date Library of philosophical books. It contains the latest writings of Western thinkers of eminence as well as a good number of Sanskrit, Marathi and Hindi books on Indian Philosophy. Every attempt is made to enable workers to get access to the best Indian and Western Philosophical thought, both through books and journals.

The research is conducted by Fellows who are selected every year in the month of June. The selected candidates join on the 1st of July and hold the fellowship for one academic year only. Extension for one or more years is given only to those who have shown a real aptitude for independent thinking during this period. The minimum qualifications required of a fellow are the possession of a high Degree in Philosophy of any recognised Indian University, and some knowledge of Sanskrit. The fellows are paid a monthly scholarship of Rs. 100, plus Rs. 20 as Dearness Allowance. Hostel accommodation is free. There are only six fellowships available every year.

There is a trust-fund of approximately Rs. 7,00,000. The expenditure of the Institute is met through the interest collected on this amount. No fees are charged, and no grant is received from the Government or from any other public body.

The permanent staff of the Institute consists of the following :—

- (1) Professor G. R. Malkani, M.Litt.—*Director*.
- (2) Professor M. R. Oak, M.A.
- (3) Professor Atmaram Shastri Jere.

The subjects in which facilities for study and research are provided include Metaphysics, Logic, Indian Philosophy, Ethics and the Philosophy of Religion.

INDIAN INSTITUTE OF SCIENCE, BANGALORE-3

INTRODUCTION

The Indian Institute of Science owes its origin to the munificence of the late Mr. J. N. Tata whose scheme of establishing a Research Centre materialised after his death by the generosity of his two sons, the late Sir Dorab Tata and the late Sir Ratan Tata. These benefactors received the support of the Government of India and the Government of Mysore.

Letters, telegrams, etc., should be addressed to the Registrar, Indian Institute of Science, Bangalore-3.

ADMISSION OF STUDENTS, COURSES OF STUDY AND RESEARCH, PAYMENT OF FEES, ETC.

1. Applications for admission to the Institute should be made in writing to the Registrar.

2. Every application for admission should be made on the prescribed form duly completed and signed by the applicant and the applicant's parent or guardian, and should be accompanied by a *non-refundable* fee of Rs. 2 for each application.

3. (i) No student shall be admitted except by the Senate after consideration of his application for admission on the basis of the recommendation of the head of the department to which he has applied.

(ii) If the candidate desires his application to be considered for admission to more departments than one, he should fill in separate forms, indicating the order of his preference in the space provided. The same order of preference should be indicated on all copies of the application and each form should be accompanied by a non-refundable fee of Rs. 2; otherwise it is liable to be rejected.

(iii) Applications together with the non-refundable fee of Rs. 2 (in postal order) for each application must reach the Registrar before the 7th of July every year. The Postal Order should be made payable to "*The Registrar, Indian Institute of Science, Bangalore-3*" and crossed. No application will be considered unless (a) *all the columns of the form are properly filled in* and the candidate's and his/her parent's/guardian's signatures are also affixed in the spaces provided, and (b) it is accompanied by a certified abstract of the marks obtained by the candidate at the qualifying examination. Evidence in original of the date of birth, preferably the Matriculation or Secondary School Leav-

ing Certificate, should be produced at the time of joining the Institute and the degree certificates in original at the commencement of the second term. The receipt of applications will be acknowledged only if addressed post cards are enclosed with the applications.

4. *Minimum qualifications for admission*: Only those who possess the minimum qualifications mentioned below will be considered for admission

B.E. including B.E. Degree awarded by the College of Engineering and Technology, Jadavpur.

B.Tech. (I.I.T.)

B.Sc. (Tech.) (4 year course after Intermediate).

B.Sc. (Engg.) (4 year course after Intermediate).

B.Sc. (Hons.) (3 year course).

B.Pharm. (3 year course).

M.Sc. including M.Sc. (Applied Physics) of the Calcutta University.

M.B. or M.B. & B.S.

I Class or II Class with at least 50% marks in the aggregate.

B.Sc. (Hons.) (2 year course).

B.Sc.

B.Pharm (2 year course).

I Class with 60% marks in the aggregate.

5. Students shall be required to produce certificates proving that they have undergone such training and attained such proficiency as may, in the opinion of the Senate, be required for admission to the particular department to which they wish to become attached. The Senate may prescribe any such additional test as it may deem necessary to prove a candidate's suitability for admission.

6. *Short-term Workers*: Research workers who possess the minimum qualifications prescribed for admission to the Institute and who are sponsored by universities, institutes or other public or industrial organisations may be permitted to work in the laboratories at the Institute for periods of not more than four months at a time by the head of the department concerned, who shall report such permission to the Senate. No such worker shall, however, be permitted to work for two such periods consecutively, nor to work for any degrees or diplomas. All such workers shall be required to conform to the rules of discipline in the Institute and to deposit each a sum of Rs. 75.

7. A student may be required to leave the Institute at any time should his/her conduct or work not prove satisfactory, or should the Senate be of opinion that he/she is incapable of taking advantage of the facilities for study and research provided in the Institute.

8. (i) *Four year limit*: No research student can continue to work in the Institute for longer than four years. Should the head of the department consider an extension of the above period necessary in the case of a student, he shall submit his recommendation to the Senate together with the reasons therefor. The Senate may, on the recommendation of the head of the department concerned, permit a student to continue in the Institute for such further period as it may consider necessary, provided that no studentship or scholarship shall be awarded to the student during the period of such extension unless there are vacancies.

(ii) In the case of holders of scholarships/fellowships awarded by the Central and State Governments or other organisations, the period during which a student holding such scholarship/fellowship can be permitted to work in the Institute will be in conformity with the conditions of award of such scholarships/fellowships subject, however, to the condition that such students shall be required to complete the work undertaken by them before the expiry of the above period and they shall be subject to the rules of discipline of the Institute.

9. (i) *Deposit of Rs. 150*: Students shall be liable to make good any loss which they may cause to the Institute by damaging apparatus or other property, or wasting material. Each student will be required on joining to deposit the sum of Rs. 150 to meet such liabilities or fines, or other dues including tuition fees, hostel and mess dues, and may be required to make up the deposit to its original amount in the event of any portion of it being applied for these purposes.

(ii) In the event of a student failing to make up the deposit to its original amount within one month of his/her being required to do so, he/she shall not be allowed to count the terms till the deposit is made up to its original amount, unless otherwise permitted by the Council on the recommendation of the Senate.

10. *Fees*: (i) Every student admitted to any of the diploma courses at the Institute shall pay the following tuition fee:

For the first year of the course: Rs. 90 for the first term at the time of joining and Rs. 90 for the second term within a fortnight of the commencement of the second term, that is on or before 16th January.

For the subsequent years: Rs. 180 for each session within a fortnight of the commencement of the session, that is on or before 14th August.

(ii) Every student admitted for research from the session 1954-55 and onwards shall pay a fee of Rs. 60 per term within a fortnight of the commencement of the term, the fee for the first term being paid at the time of joining the Institute.

(iii) Students who pay tuition fees after the due dates shall not be permitted to count the days in the terms prior to the dates of payment of the fees, for the computation of the minimum attendance prescribed.

(iv) If a student undergoing a diploma course discontinues after the end of August in any session he/she shall pay the entire fee for the session.

11. Before a student is permitted to enter upon a course of study or research he/she may be required to follow such course of instruction as may be considered necessary.

12. Transfer of students between the diploma courses in Electrical Technology and Electrical Communication Engineering may be allowed only on a mutual exchange basis.

13. *Freeships*: The Institute awards a limited number of free-ships to needy and deserving research students. A student in receipt of any scholarship is not eligible to hold a freeship.

CONFERMENTS

14. *Diploma Courses*: (i) Diplomas (D.I.I.Sc.), may be granted by the Council on the recommendation of the Senate to students who have completed satisfactorily courses of studies approved by the Senate.

(ii) Students who are awarded the Diplomas of the Institute in the various subjects, viz., Aeronautical Engineering, Chemical Engineering, Electrical Communication Engineering, Electrical Technology, Internal Combustion Engineering, Metallurgy and Power Engineering, etc., may use the letters (A.E.), (Ch. Engg.), (E.C.E.), (E.T.), (I.C.E.), (Met.), and (P.E.) respectively after the letters D.I.I.Sc.

15. No student shall be allowed to work simultaneously for the conferments of the Institute and the degrees of universities.

16. *Associateship*: (i) Associateships (A.I.I.Sc.) equivalent to a first class M.Sc. degree of a University, may be awarded by the Council on the recommendation of the Senate to students who possess the following minimum qualifications for admission and who have devoted

Session: from the 1st of August in any year to the 30th of April in the year following.

First Term: From the 1st of August to the 13th of December.

Second Term: From the 3rd of January to the 30th of April.

Mid-Term Recess: From the 14th of December to the 2nd of January.

Vacation: From the 1st of May to the 31st of July.

a minimum of two years entirely to research and have submitted a thesis approved by the Senate of such work :

D.I.I.Sc.	}	
B.E. including B.E. Degree awarded by the College of Engineering and Technology, Jadavpur.		
B.Tech. (I.I.T.)	}	
B.Sc. (Tech.) 4 year course after Intermediate.		I Class or II Class with at least 50% marks in the aggregate.
B.Sc. (Engg.) 4 year course after Intermediate.		
B.Sc. (Hons.) (3 year course).		
B.Pharm. (3 year course).		
M.Sc. including M.Sc. (Applied Physics) of the Calcutta University.		
M.B. or M.B. & B.S.	}	
B.Sc. (Hons.) (2 year course).		I Class with 60% marks in the aggregate.
B.Sc.		
B. Pharm. (2 year course)		

(ii) Before recommending a candidate to the Council for Associateship, the Senate shall select a suitable referee and invite his opinion regarding the merits of the candidate. The opinion of the referee shall be forwarded by the Senate to the Council along with its recommendations for the conferment of the Associateship.

17. *Membership* : (M.I.I.Sc.) which shall be equivalent to the Ph.D. degree of a University may be awarded by the Council on the recommendation of the Senate to students :

(i) who are Associates or who hold the Diplomas of the Institute in Power Engineering or an M.Sc. degree by research or a first class M.Sc. degree, or in the event of there being less than five first classes in any year, the first five in rank in the M.Sc. examination provided they have passed in the first or second class, and who have devoted a minimum of one year entirely to research work and have submitted a thesis which is approved by the Senate ;

(ii) who possess the following minimum qualifications for admission and who have devoted a minimum of three years entirely to research work and have submitted a thesis which is approved by the Senate :

D.I.I.Sc. (other than P.E.)	}	I Class or II Class with at least 50% marks in the aggregate.
B.E. including B.E. Degree awarded by the College of Engineering and Tech- nology, Jadavpur.		
B.Tech. (I.I.T.)		
B.Sc. (Tech.) 4 year course after Inter- mediate.		
B.Sc. (Engg.) 4 year course after Inter- mediate.		
B.Sc. (Hons.) (3 year course).		
B.Pharm. (3 year course).		
M.Sc. including M.Sc. (Applied Physics) of the Calcutta University.	}	I Class with 60% marks in the aggregate.
M.B. or M.B. & B.S.		
B.Sc. (Hons.) (2 year course).		
B.Sc.		
B. Pharm. (2 year course)		

Before recommending a candidate to the Council for the Membership, the Senate shall select a board of two suitable referees, one of whom shall be the chairman of the board of referees and invite the unanimous opinion of the referees regarding the merits of the candidate. Such opinion shall be forwarded by the Senate to the Council along with its recommendation for the conferment of the Membership.

18. *Fellowship*: (F.I.I.Sc.) which shall be equivalent to the D.Sc. degree of a university, may be awarded by the Council on the recommendation of the Senate and with the previous approval of the Visitor to:

(i) Members who having spent a minimum of three years at the Institute or in actual practice can produce evidence of having done original and valuable research work, or having otherwise made an outstanding contribution to the advancement of scientific or industrial knowledge; and

(ii) Associates who having spent a minimum of four years at the Institute or in actual practice can produce evidence of having done original and valuable research work, or having otherwise made an outstanding contribution to the advancement of scientific or industrial knowledge.

Before recommending a candidate to the Council for the Fellowship, the Senate shall select a board of three suitable referees, one of whom shall be the chairman of the board of referees, and invite the unanimous opinion of the referees regarding the merits of the candidate. Such opinion shall be forwarded by the Senate to the Council with its recommendation for the conferment of the Fellowship.

19. The recommendations of the referees where there are more referees than one, on the merits of the candidates for the Associateship, Membership or Fellowship shall be unanimous. Any point of difference shall be taken up by the chairman of the board with the other referees with a view to securing unanimity in the recommendations.

20. *Referees' fees*: The referees selected by the Senate, in connection with the award of Associateships, Memberships and Fellowships shall each receive an honorarium of Rs. 75 and the chairman of the board of referees an additional sum of Rs. 25 as chairman's fee.

21. The fee to be paid by the student for the Associateship shall be Rs. 75 ; for the Membership Rs. 175 and for the Fellowship Rs. 250.

22. *Honorary Fellowship*: The Honorary Fellowship of the Institute may, on the recommendation of the Council be conferred by the Visitor on persons who have attained eminence in the field of science or industry or who have rendered signal service to the Institute.

23. If the Council is satisfied that any person to whom a Certificate or Diploma of the Institute has been granted or on whom the Associateship, Membership or Fellowship has been conferred, is guilty of dishonourable conduct, the Council may, with the previous approval of the Visitor, withdraw the Certificate, Diploma, Associateship, Membership or Fellowship granted to or conferred, as the case may be, on such a person. The Certificate, Diploma, Associateship, Membership or Fellowship withdrawn as aforesaid may be restored by the Council with the previous approval of the Visitor, if for reasons to be stated in writing, it considers desirable to do so.

24. *Discipline*: Students of the Institute are expected to dress and conduct themselves in a proper manner. Heads of departments may make such rules with regard to the dress of students working in laboratories or in the neighbourhood of machinery as may be necessary in order to avoid accidents.

25. *Attendance and Leave*: Students are required to attend such laboratory and lecture courses as the Senate may prescribe and not to absent themselves from work without adequate reason. Applications for leave of absence shall be made in writing to the head of the department to which the student is attached.

26. A minimum of 75 per cent of attendance for the whole year is compulsory for the diploma course students. Research students may, however, take leave up to a maximum of thirty-five working days in the year; to which may be added, in the case of those who attend the Indian Science Congress, the period of the meeting, namely, seven days, and the days of travel to and from the Congress. Saturday will be regarded as full day for purposes of leave. Leave

of absence to students shall be sanctioned by the heads of departments concerned.

Students who fail to put in the required number of days of attendance in any term/year shall not be allowed to count the term/year unless permitted by the Senate for reasons to be recorded in writing.

FELLOWSHIPS, STUDENTSHIPS AND SCHOLARSHIPS

The J. C. Mahindra Research Fellowship in Internal Combustion Engineering: The Directors of Messrs. Mahindra and Mahindra Ltd., Bombay, have recently endowed the above Fellowship of the value of Rs. 250 per month for research in internal combustion engineering.

The Jamshed R. D. Tata Research Studentship in Aeronautics of Rs. 150 per month has been instituted by the Trustees of the J. R. D. Tata Trust tenable in the Department of Aeronautical Engineering.

The Sanat Kumar Roy Chaudhury Research Scholarship of the value of Rs. 150 per month has been instituted by Mr. Sanat Kumar Roy Chaudhury for research work on the utilisation of waste materials or energy.

A limited number of *Institute Studentships* of the value of Rs. 125 per mensem each is available in the various departments to students possessing the following qualifications:

A.I.I.Sc.

D.I.I.Sc. (in Engineering subjects)

M.Sc. (by research)

M.A., M.Sc., B.E. or B.Sc. (Engg.) I class or those placed in the I or II ranks if there be none in the I class during any year.

Institute Scholarships of the value of Rs. 75 per mensem each are available in the departments under the Science Faculty for award to those possessing the minimum qualification of B.Sc. or B.Pharm. I class or 60 per cent marks in the aggregate.

The award of *Institute Studentships* is made for a period not exceeding one year at a time, the total period not exceeding five years.

The award of *Institute Scholarships* is made for a period not exceeding one year at a time, the total period not exceeding four years. The Senate may, on special grounds to be recorded, extend the total period by one year.

A studentship holder shall be required to give an undertaking in the prescribed form to refund to the Institute the amount of the studentship paid to him/her in the event of his/her discontinuing studies at the Institute before the end of the first year of the award.

The Government of India in the Ministry of Education has instituted 45 research training scholarships of Rs. 200 p.m. each at the Institute. It has also provided for scholarships of Rs. 150 p.m. each to half the number of students undergoing the post-graduate diploma courses in automobile engineering, foundry engineering, high voltage engineering, electronic engineering, ultrashort and microwave engineering, line communication engineering and acoustical engineering.

Besides these, the Governments of Andhra, Assam, Bihar, Bombay, Delhi, Madhya Pradesh, Madras, Mysore, Orissa, the Punjab, the Uttar Pradesh and West Bengal have instituted scholarships tenable in the various departments of the Institute.

The Sir Dorabji Tata Trust, the M. C. Ghia Charities, and the Hargovandas Lakmichand Charity Trust also award scholarships to needy and deserving students at the Institute.

Subject to review by the Council, the Senate may on account of misconduct or unsatisfactory work withdraw from the holder a studentship or scholarship at any time and/or decide that a studentship or scholarship be refunded by such holder from the date of the last award.

MEDALS

The following medals are awarded by the Institute.

The Sudborough Medal: To the best student of the year alternately in the departments of General Chemistry and Organic Chemistry.

The Hay Medal: To the best student of the year alternately in the diploma courses in Electrical Technology and Electrical Communication Engineering.

The Martin Forster Medal: To the author of the best research paper published during the year in the Journal of the Institute alternately in the departments belonging to the Science Faculty and the Engineering Faculty.

The Guha Research Medal: To the best student in the department of Organic Chemistry during the two years immediately preceding the year of award and the medal to alternate with the Sudborough Medal.

The M. Sreenivasaya Prize: For the best piece of work done in the field of Fermentation Technology at the Institute.

PRACTICAL TRAINING AND EDUCATIONAL TOURS

Educational tours are arranged every year and students who are sent on educational tours or who proceed for practical training are paid single third class railway fare each way by the shortest route.

Students of the final year of the courses, however, are paid such fares only from Bangalore to the places of practical training. Transport from the Institute to the railway station will be provided if possible, and where necessary the actual bus fare in the lowest class will be paid.

THE MECHANICAL ENGINEERING WORKSHOP

The Mechanical Engineering Workshop of the Institute provides instruction in workshop theory and practice to students of the Institute. Scientific apparatus, precision instruments and fittings required by the various departments for their research are fabricated as far as practicable.

The Workshop includes facilities for the design and construction of electrical apparatus, such as motors, generators, transformers etc. It has also a machine shop, a fitting shop, a carpenter's shop, a foundry, etc.

MODERN EUROPEAN LANGUAGES

Classes in French and German are held to assist students and other members of the Institute in attaining such knowledge of these languages as will enable them to read technical books and journals. A Reading Room with a Sectional Library, well equipped with specialized dictionaries and text books, offers facilities to students for reading technical literature outside the language classes.

Magnetic Wire Recorder and Linguaphone Records in French, German and Russian are also available for the study of these languages.

The student of a diploma course is required to put in a minimum attendance of 75 per cent of lectures in German and/or French and pass a Proficiency Test in one of these languages. Examinations will be held in German and French at the same time; and he must secure a minimum of 50 per cent marks in either of these before he becomes eligible for the award of the diploma.

Every research student is required to attend the lectures in German and/or French and pass the examination in one of them before he is allowed to submit his thesis for any Institute Conferment.

Exemptions from attendance at lectures and examinations in German or French may be granted if a student produces evidence of having undergone such a course already and attained the required degree of proficiency in it. Such exemptions will be granted only if the student passes a language test arranged by the Lecturer in Modern European Languages.

A student who has completed the course in German may take up the course in French, if he desires to do so.

Students desiring to appear for the Bombay University Language Test should study the language for at least six months with the Lecturer in Modern European Languages prior to such Test. Applications for the Language Test of the University be forwarded only on a report from the Lecturer.

The Modern European Languages operates a Technical Translation Service which supplies translations to the members of the Institute and also, at a small charge to other institutions throughout the country. A list of translations available is kept in the Reading Room for information and record, and copies thereof can be obtained for personal use at a nominal rate.

A micro-film reader and projector are available for use.

INDUSTRIAL ENGINEERING AND ADMINISTRATION

This Section provides part-time courses in (a) Industrial and Production Engineering, and (b) Industrial Administration, available to those who possess the prescribed minimum qualifications and have preferably about two years of experience in Industry/Administration.

Research: Students who possess the prescribed minimum qualifications are also admitted for research in Industrial Engineering and Industrial Administration.

ECONOMICS AND SOCIAL SCIENCES

The section was started in 1947 and provides background instruction in Social Sciences, i.e. Industrial Economics and Industrial Psychology with special reference to Industrial Relations. The courses of lectures are spread over the first two years of the diploma courses; a minimum of 75 per cent attendance at these lectures is compulsory for all diploma course students. This instruction is intended to make the young scientist or engineer appreciate modern trends in economics and human relations, to enable him to utilise the human element in industry to the best advantage of society. It also enables him to use the methods of studying fundamental science and engineering in the study and practice of business administration.

The studies in Economics include an understanding of economic institutions and the functioning of industrial systems in the modern world and a knowledge of current economic problems such as natural resources, prices and production, industrial efficiency and economic planning. The course in Psychology covers important topics like psychology of behaviour with special reference to industry, statistical procedures and field survey methods, industrial relations and industrial efficiency.

Research: Students who possess the prescribed minimum qualifications are also admitted for research in Industrial Economics and Industrial Psychology.

APPLIED MATHEMATICS

The Department of Applied Mathematics has been established for assistance in research to the various departments of the Institute and for conducting research in Mathematics. The Department will admit six students for instruction in Advanced Mathematics, the minimum requirements being a first class M.A. or M.Sc. degree in Mathematics or Mathematical Physics. Before a student is admitted to the Department, he will be required to show that he possesses a sound knowledge of the subject and aptitude for research.

The Department offers facilities for theoretical research work in Fluid Mechanics, Elasticity, Astrophysics, Function-theoretic and Transform methods and the allied topics.

THE LIBRARY

The Library of the Institute is one of the best scientific libraries in the country both in books and journals. It receives journals from almost all the countries of the world and has at present 55,562 volumes including books and periodicals.

Photostat Service: Photostat copies of articles from scientific and technical journals available in the Library will be supplied at the following rates:

Size	Rate per page per copy
Up to 11" × 6"	Rs. 0.50
Up to 17" × 11"	Re. 0.75
Up to 23" × 17"	Re 1.25

Postage and packing extra.

JOURNAL OF THE INDIAN INSTITUTE OF SCIENCE

The *Journal* of the Institute is published every quarter in January, April, July and October. Reports of the scientific research work done in the various departments of the Institute are published in it. The current volume number in 1957 is 39. The annual subscription is Rs. 24 in India, £ 2-5-0 in the U.K. and \$ 6.50 in the U.S.A. and Rs. 30 for other countries, post free.

PROFESSIONAL SOCIETIES

The following professional associations are functioning in the Institute and conduct periodical meetings, lectures, colloquia, seminars and symposia:

Association of Scientific Workers of India,
Biochemical Society,
British Institution of Radio Engineers, Indian Section—
Bangalore Branch,
Chemical Engineering Association,
Electrical Engineering Society,
Electro Chemical Society Inc.—India Section,
Engineering Society,
Indian Institute of Metals—Bangalore Chapter,
Royal Institute of Chemistry—Bangalore Branch,
Scientific Film Society of India,
Society of Biological Chemists.

The Electrical Engineering Society publishes a journal called "Electrotechnics" and the Engineering Society "The Institute Engineer". Colloquia and symposia on various topics are held at the Institute.

THE HOSTEL

The Hostel is under the control of a Warden, who is responsible to the Director for its management and for the maintenance of order and discipline in it. The Hostel is fully equipped and staffed.

There is accommodation for about 420 students.

Students shall be required to reside in the Hostel. If accommodation in the Hostel proves insufficient, they may reside in approved lodging with the previous approval of the Director. Such permission may be withdrawn by the Director at any time for sufficient reasons. The Senate may grant permission to a student to reside elsewhere provided that such permission may be withdrawn at any time.

The Hostel Mess provides vegetarian and non-vegetarian food and is managed by the Students' Mess Representative Committee elected by the boarders. The charges for full board vary from Rs. 55 to Rs. 65 per month. All charges for the preceding month are to be paid in full on or before the 7th of the succeeding month. If dues are not cleared within a week from this date, the defaulting member will be liable to forfeit his seat in the Hostel and will be liable to be excluded from the Hostel Mess. His statutory deposit may be adjusted towards the dues, entailing loss of term till the deposit is made up to the original amount.

THE INSTITUTE OF SCIENCE GYMKHANA

The Gymkhana provides recreation (indoor and outdoor games) and social amenities for students and members of Group I staff of the Institute. Members of the Gymkhana shall pay a subscription of Rs. 8 per annum in one instalment, or Rs. 4.25 per instalment in two instal-

ments. Attached to the Gymkhana are the Ranade Reading Room and Library, a gymnasium, a swimming pool, a rifle club, a fine arts and rhetoric society, a film club and the Gymkhana stores. Sales from the stores are effected only against coupons, which can be purchased by members from the Warden.

THE NATIONAL CADET CORPS : UNIT OF THE ELECTRICAL AND MECHANICAL ENGINEERING SECTION

This unit of sixty cadets was inaugurated in the first week of August 1951 by Dr. John Matthai, who was the President of the Court of the Institute. Parades are held twice a week. There are classes of two hours and three hours duration on Wednesdays and Saturdays.

The cadets are awarded certificates B and C after one and two years of training respectively.

The course of training includes P. T. drill, weapon training, map reading, message writing, wireless and radar.

At the end of the training an annual camp of fourteen days duration is held. Periodical educational tours are also arranged.

The cadets are bound by the rules in force of the Unit ; and any action taken against them for a breach of any of the rules of the Unit will be taken note of while testimonials are issued to them from the Institute.

SUBJECTS OF INVESTIGATION IN THE DIFFERENT DEPARTMENTS

I. General Chemistry.

Research in :

- (a) Adsorption from solutions, floatation, detergency, association colloids and macromolecules.
- (b) Electrochemistry.
- (c) Rare earths and transition metals, including metallic complexes and ion-exchange, phase rule and tracer techniques.
- (d) Reaction kinetics, molecular structure and dipole moments.
- (e) Adsorption and technical gas reactions, including catalysis and determination of thermodynamic data.

II. Organic Chemistry.

Research in :

- (a) Synthetic Steroids.
- (b) Synthetic and Natural Drugs.
- (c) Terpenoids.
- (d) Reaction Mechanism.
- (e) Oils and Fats.
- (f) Carbohydrates.

III. Biochemistry.

Research in :

- (a) Antibiotics.
- (b) Chromatography.
- (c) Cytogenetics.
- (d) Electrophoresis.
- (e) Enzyme Chemistry.
- (f) Food and Nutrition.
- (g) Protein Chemistry.
- (h) Sanitation Biochemistry.
- (i) Vitamin Biochemistry.
- (j) Spectroscopic studies of Biochemical Compounds.

IV. Physics.

Research in :

- (a) Raman Effect and Spectroscopic studies.
- (b) Molecular scattering of light.
- (c) X-rays and Crystallography.
- (d) Crystal Optics.
- (e) Elastic properties of crystals.
- (f) Thermal properties of crystals.
- (g) Magnetism and Magneto Optics.
- (h) Infra red spectroscopy.
- (i) Ultrasonics.
- (j) Colloid Optics.
- (k) Radio activity of Rocks and Minerals.
- (l) Mathematical Physics.

V. Applied Mathematics.

Research in :

- (a) Fluid Mechanics.
- (b) Elasticity.
- (c) Astrophysics.
- (d) Function-theoretic and Transform methods.
- (e) Allied Topics.

VI. Research in:

- (a) Pharmacology.
- (b) Fermentation Technology.

VII. Aeronautical Engineering.

Research in :

- (a) Fluid Mechanics with special reference to Turbulence and Boundary Layers.
- (b) Subsonic and Supersonic flow.

- (c) Wind Tunnel techniques and design (Subsonic and Supersonic).
- (d) Wing Theory.
- (e) Elasticity with special reference to Aeronautical Structures.
- (f) Experimental stress Analysis (Photo Elasticity, Strain Gauges and brittle lacquer technique).
- (g) Aircraft vibrations.

VIII. Internal Combustion Engineering.

Research in :

- (a) Low pressure fuel injection in Diesel Engines.
- (b) U Type two-stroke Diesel Engine.
- (c) Utilisation of heavy fuels, vegetable oils as fuels for H.S.D. Engines.
- (d) Utilisation of alcohol in single and multi-cylinder engines.
- (e) Investigation on the performance of two-stroke engines.
- (f) Studies on combustion and combustion chamber design.
- (g) Stratification of charge in free vortex flow-Model and engine studies.
- (h) Gas cleaners and Cyclone Dust collectors.
- (i) Combustion in oscillating gas columns.
- (j) Heat and mass transfer in pulsating flow.
- (k) Studies on noise and vibration in engine installations.
- (l) Investigation on and development of industrial engines.
- (m) Testing of engine components produced from local resources.
- (n) Gas Turbine Technology.
- (o) Bending and Torsion tests on chassis frames.
- (p) Testing of radiators and fans.
- (q) Testing of automotive springs.
- (r) Testing of torque converters.
- (s) Experimental stress analysis in automobile components.

IX. Metallurgy.

Research in :

- (a) Physical Metallurgy and Physics of Metals.
- (b) X-ray Metallurgy and Electron Microscopy.
- (c) Extractive Metallurgy of Non-ferrous Metals.
- (d) Electro-metallurgy and Electro-deposition.
- (e) Beneficiation of Low Grade Ores.
- (f) Powder Metallurgy and Foundry Work.
- (g) Light Alloys.

X. Power Engineering.**Research in :***Electrical Engineering.*

- (a) Power System Design, Power Transmission and Relaying.
- (b) Industrial Applications—Electrical Machines and Apparatus.
- (c) Electrical Measurements and Measuring Apparatus.
- (d) Electrical Illumination Engineering.
- (e) High Voltage Engineering.

Mechanical Engineering.

- (a) Heat Transmission.
- (b) Fluid Mechanics.
- (c) Gas Temperature Measurements.
- (d) Combustion.
- (e) Dynamics of Machinery.
- (f) Mechanics of Materials.
- (g) Foundry Engineering.

Civil and Hydraulic Engineering.

- (a) Measurement of flow.
- (b) Design of Rotodynamic Machinery.
- (c) Cavitation and high velocity flow.
- (d) Application of Electrical Analogs to solution of hydraulic problems.
- (e) Hydraulic transients, turbine blades and draft tubes.
- (f) Advanced Structural Engineering.
- (g) Experimental Stress Analysis.
- (h) Applied Elasticity.
- (i) Concrete Technology including Reinforced and Prestressed Concrete.
- (j) Engineering properties of soils under dynamic loads.
- (k) Design and testing of foundations for structures.

High Voltage Engineering.

- (a) High Voltage Transmission lines.
- (b) Measurement of High Voltages (AC, DC & Surges).
- (c) Study of travelling waves.
- (d) Lightning protection.
- (e) Insulation problems at E.H.V.

- (f) Study of high current surges.
- (g) Breakdown mechanism in solids, liquids and gases.

XI. Electrical Communication Engineering.

Research in :

- (a) Electronic Engineering.
- (b) Radio Engineering, including Ultra-Short and Microwave Technique.
- (c) Line Communication Engineering.
- (d) Electro-acoustics.
- (e) Analogue Computers

XII. Chemical Technology and Chemical Engineering.

Research in :

Fuel Technology.

- (a) Low temperature carbonization and gas conversion.
- (b) Total gasification of low grade coals by fluidisation method.
- (c) Investigation in Fischer-Tropsch Catalysis and reaction fundamentals.
- (d) Oxo-synthesis under high pressure.
- (e) Cracking and aromatisation of hydrocarbons including hydrocarbon separation.
- (f) Shrinking of low grade coal briquettes during carbonisation.

Ore-treatment Investigation.

- (a) Application of fluidization method on different ores.
- (b) Hoematite and magnetite reduction by fluidization with reducing gases.
- (c) Application of phase-exchange principle for demineralization of graphite and coal.
- (d) Application of phase-exchange principle for separation and enrichment of ores.

Isotope Separation Investigation.

- (a) Enrichment of heavy water from "Bitterns".
- (b) Enrichment of U^{235} and other active agents by adsorption.
- (c) Separation of B^{10} by thermal diffusion method.

XIII. Research in :

- (a) Industrial Engineering and Administration.
- (b) Industrial Economics.
- (c) Industrial Psychology.

DIRECTOR

S. Bhagavantam, D.Sc.

REGISTRAR

A. G. Pai, M.A. (Cambridge and Agra).

DEPARTMENT OF GENERAL CHEMISTRY

H. E. H. the Nizam Professor of Inorganic and Mineral Chemistry and Head of the Department :

K. R. Krishnaswami, D.Sc. (London), F.R.I.C., F.A.Sc., F.N.I., M.M.G.I.

Professor of Physical Chemistry :

M. R. Aswatha Narayana Rao, D.Sc. (Madras), F.R.I.C., F.A.Sc.

Assistant Professor :

(Vacant).

Lecturers :

T. L. Rama Char, M.Sc., Ph.D. (Dacca), M.Electro-Chem.S., F.R.I.C., A.Inst.P., A.I.M.

C. C. Patel, M.Sc., Ph.D. (Bombay).

R. S. Subrahmanya, D.Sc. (Mysore).

A. R. Vasudevamurthy, D.Sc. (Mysore).

Research Assistants :

N. H. Sivaramakrishnan, M.Sc. (Banaras), Ph.D. (Bombay), (*Senior*)

S. Soundararajan, M.Sc. (Madras), Ph.D. (Madras).

C. S. Ramanathan, M.Sc. (Bombay), D.I.I.Sc.

V. Srinivasan, M.Sc. (Bombay), D.I.I.Sc.

DEPARTMENT OF ORGANIC CHEMISTRY

Professor and Head of the Department :

D. K. Banerjee, D.Sc. (Calcutta), F.A.Sc.

Assistant Professor :

B. H. Iyer, M.Sc., Ph.D. (Bombay), A.I.I.Sc., F.R.I.C.

Lecturers :

Sukh Dev, B.Sc. (Hons.), M.Sc., Ph.D. (Punjab).

Iqbal Singh Bhatia, B.Sc. (Hons.), M.Sc. (Punjab), Ph.D. (Johns Hopkins).

Research Assistants :

- M. V. Bhatt, B.Sc. (Madras), A.I.I.Sc., Ph.D. (Bombay) (*Senior*)
K. V. Viswanathan, B.Sc. (Madras), M.Sc. (Bombay).
V. R. Mallikarjuneswara, M.Sc. (Bombay).
S. N. Balasubramanyam, M.Sc. (Banaras).

DEPARTMENT OF BIOCHEMISTRY

Professor and Head of the Department :

- K. V. Giri, B.A., M.Sc., D.Sc. (Calcutta), A.I.I.Sc., F.A.Sc.,
F.R.I.C., F.N.I.

Assistant Professors :

- Homi R. Cama, B.A., M.Sc. (Bombay), Ph.D. (Liverpool).
M. K. Subramaniam, M.A., M.Sc., D.Sc. (Madras), F.A.Sc.

Lecturers :

- P. L. Narasimha Rao, M.Sc. (Annamalai), Ph.D. (Bombay).
S. C. Pillai, Ph.D. (Madras), A.I.I.Sc., A.R.I.C., M.R.San.I.,
M.Inst.S.P.
R. K. Maller, M.A., Ph.D., A.I.I.Sc.
J. Ganguly, M.Sc. (Dacca), Ph.D. (Reading).

Research Assistants :

- S. Natarajan, B.Sc. (Pharm.) (Madras).
C. S. Vaidyanathan Ph.D. (Madras).
Miss Saraswathi Royan, M.Sc. (Mysore).
B. R. Das, M.Sc. (Bombay).

DEPARTMENT OF PHYSICS

Professor and Head of the Department :

- R. S. Krishnan, M.A., D.Sc. (Madras), Ph.D. (Cambridge), F.A.Sc.,
F.N.I., F.Inst.P.

Assistant Professor :

- S. Ramaseshan, M.Sc. (Nagpur), A.I.I.Sc., D.Sc. (Nagpur),
F.A.Sc.

Lecturers :

- P. S. Narayanan, M.A., M.Sc. (Madras), Ph.D. (Madras).
R. V. G. Sundara Rao, M.Sc. (Andhra), D.Sc. (Andhra).

Research Assistants :

- K. Vedam, B.Sc. (Hons.) (Nagpur), M.Sc. (Nagpur), Ph.D. (Saugar)
(*now abroad*) (*Senior*).
T. A. Hariharan, M.Sc. (Delhi).
S. Swaminathan, M.Sc. (Rajaputana) (*Junior-temporary*).
C. K. Narayanaswamy, B.Sc. (Mad.), M.A. (Mad.).

PHARMACOLOGY LABORATORY

Assistant Professor :

M. Sirsi, M.B. & B.S. (Mysore), L.T.M.

Lecturer :

T. Ramakrishnan, B.A., M.Sc. (Madras), Ph.D. (Br. Columbia).

Research Assistant :

A. S. Ramaswamy, B.Sc., M.B. & B.S. (Mysore).

FERMENTATION TECHNOLOGY LABORATORY

Assistant Professor :

J. V. Bhat, M.Sc., Ph.D., D.Sc. (Bombay), F.A. Sc.

Research Assistant :

B. Ranganathan, B.Sc. (Hons.) (Mysore), M.Sc. (Bombay), Ph.D. (Bombay).

DEPARTMENT OF AERONAUTICAL ENGINEERING

Professor and Head of the Department :

Satish Dhawan, M.A. (Punjab), B.Sc. (Engg.) (Punjab), M.S. (Minnesota), Ae.E. (Cal. Tech.), Ph.D. (Cal. Tech.).

Assistant Professors :

C. V. Joga Rao, B.Sc. (Engg.) (Banaras), M.S. (Stanford), Ae.E. (Cal. Tech.), Cert. of Prof. in Aero-Engg. (I.I.Sc.).

T. N. Krishnaswamy, B.E. (Elec.), B.E. (Mech.) (Mysore), Cert. of Prof. in Aero-Engg. (I.I.Sc.), A.F.Ae.S.I.

Lecturers :

P. Srinivasa Row, M.Sc. (Calcutta).

Arabindo Das, B.E.E., B.M.E. (Jadavpur), D.I.I.Sc. (A.E.).

S. M. Ramachandra, B.E. (Mysore), D.I.I.Sc. (A.E.).

P. Narasimhamurthy, B.E. (Annamalai), D.I.I.Sc. (A.E.).

D. M. Rao, B.Sc. (Allahabad), D.I.C. (London), Grad. R.Ae.S. (London).

S. N. Chaudhuri, M.Sc. (Allahabad), M.Sc. (Nagpur), Ingenieur de l'Aeronautique (E.N.S.A.-Paris), A.F.Ae.S.I.

A. K. Ray, M.Sc. (Calcutta), Dr. rer.nat. (Gottingen).

Technical Assistants :

M. A. Badrinarayanan, B.Sc., D.I.I.Sc. (A.E.).

V. S. Rajamani, B.E. (Tele. Com.) (Mad.).

Junior Research Assistant :

Mrs. B. V. Saroja, M.Sc. (Mysore).

DEPARTMENT OF INTERNAL COMBUSTION ENGINEERING

Professor and Head of the Department :

(Vacant).

Assistant Professors :

M. R. Krishnamurthy Rao, B.E. (Mech.) (Mysore), A.M.I.E. (India) .

K. Mahadevan, B.E. (Mech.) (Madras), Mem. S.A.E., M.I.I.Sc.

Lecturers :

A. V. Sreenath, B.E. (Mech.) (Mysore), A.M.I.E. (India) .

K. Narayanaswamy, B.Sc., B.E. (Mech.) (Mysore).

T. L. Narasimhan, B.E. (Mech.) (Mysore), Mem. S.A.E., A.I.I.Sc.

V. Kuppu Rao, B.E. (Mech.) (Mysore).

Technical Assistant :

N. Srinivasa Murthy, B.E. (Mysore), D.I.I.Sc. (I.C.E.)

Senior Research Assistants :

B. S. Chittawadgi, B.E. (E & M) (Poona).

K. Krishna Prasad, B.E. (Mech.) (Mysore)

Y. M. Balakrishna, B.Sc. (Mysore), B.E. (Mech.) (Mysore).

DEPARTMENT OF METALLURGY

Professor and Head of the Department :

A. A. Krishnan, B.A. (Madras), B.Sc. (Met.) (Banaras), Ph.D. (Ohio) .

Assistant Professor :

T. R. Anantharaman, M.A., M.Sc. (Madras), D.I.I.Sc. (Met.), D.Phil. (Oxford) .

Lecturers :

J. Balachandra, B.Sc., B.E. (Mysore), M. Electrochem. Soc.

D. L. Bhattacharya, M.Sc. (Calcutta), Grad. I.E.E.

R. Mallikarjunan, M.A. (Madras), D.I.I.Sc. (Met.), A.R.I.C.

B. S. Subramanya, B.Sc. (Mysore), D.I.I.Sc. (Met.), M.S. (Illinois) .

Senior Research Assistants :

R. K. Rama Murthy, M.Sc. (Patna).

K. S. Grewal, B.Sc. (Hons.) (Punjab), D.I.I.Sc. (Met.).

V. Ramachandran, B.Sc. (Madras), D.I.I.Sc. (Met.)

ELECTRICAL ENGINEERING SECTION

Professor :

C. S. Ghosh, M.Sc. (Calcutta), S.M. (M.I.T.), F.N.I., Mem.A.I.E.E.,
Mem.I.E.S., M.O.S.A., A.M.I.E.E.

Assistant Professors :

H. N. Ramachandra Rao, M.Sc. (Calcutta), M.I.E. (India), Mem.
A.I.E.E.

B. N. Narayana Iyengar, B.Sc. (Hons.) (Mysore), Assoc.I.E.E.,
A.M.I.E. (India), A.M.A.I.E.E.

Lecturers :

M. S. T. Narayanan, B.E. (Mysore), A.M.I.E.E., Mem. A.I.E.E.

Joseph Vithayathil, B.Sc. (Elect. Engg.) (Travancore), B.Sc. (Engg.)
(Hons.) (London), Grad. I.E.E., A.M.A.I.E.E.

K. S. Prabhu, B.A. (Madras), M.Sc. (Banaras), D.I.I.Sc. (E.T.&
E.C.E.) Grad.I.T.E., A.M.A.I.E.E.

S. Ganapathy, B.Sc. (Hons.) (Andhra), D.I.I.Sc. (E.T.) A.I.I.Sc.

Technical Assistants :

M. S. Kamath, B.E. (Elec.) D.I.I.Sc. (P.E.)

C. G. Ramaswamy, B.Sc. (Hons.) (Mysore), D.I.I.Sc. (E.T.),
A.I.I.Sc.

Senior Research Assistants :

G. Krishna, B.E. (Mysore).

V. Krishnan, B.Sc. (Madras), B.Sc. (Engg.) (Banaras), Grad. Brit.,
I.R.E. (now abroad)

MECHANICAL ENGINEERING SECTION

Professor :

A. Ramachandran, B.E. (Madras), M.S., P.D. (Purdue), Assoc. Mem.
A.S.M.E., A.M.I.Mech.E., A.M.Inst.F., M.S.I.T.

Assistant Professors :

R. G. Narayana Murthy, B.E. (Hons.) (Madras), D.I.I.Sc. (A.E.),
D.I.C. (Mech.Engg.) (London), Mem. A.S.M.E.

S. Rama Murthi, B.Sc. (Madras), B.Sc. (Met.) (Banaras), Ph.D.
(Banaras), M.I.M.

P. Venkata Rao, B.Sc. (Hons.), M.Sc. (Andhra), Cert. of Prof. in
Elec. Tech. (I.I.Sc.), A.M.A.I.E.E., F.I.P.S., Assoc. Mem.
V.D.E. (Germany), Mem.T.C.G.B.

Lecturers :

P. Srinivasan, B.Sc., B.E. (Mech.) (Mysore), M.S. (Illinois Institute
of Technology), M.E. (California Institute of Technology).

M. A. Tirunarayanan, B.Sc. (Madras), B.E. (Mech.) (Mysore).

- M. R. Raghavan, B.E. (Mech.) (Mysore).
 G. Hazra, M.Sc. (Calcutta), Grad. Inst. P. (London).
 B. K. Subba Rao, B.E. (Mysore).

Technical Assistants :

- P. R. Srinivasan, B. E. (Mysore).
 M. R. Seshadri, B.Sc. (Mysore), D.I.I.Sc. (Met.)
 B. Ramaswamy Rao, L.E.E.

Research Assistant :

- R. Ananthanarayanan, B.E. (Madras). (Senior).

CIVIL AND HYDRAULIC ENGINEERING SECTION

Professor :

- N. S. Govinda Rao, B.E., M.Am.C.I., M.I.E. (India), Mem. ASCE,
 M.I.A.H.R., F.A.Sc.

Assistant Professors :

- K. Seetharamiah, B.E. (Mysore), Cert. of Prof. in Elec. Tech.
 (I.I.Sc.), A.M.I.E. (India), Am.A.S.C.E. Mem. I.A.H.R.
 K. T. Sundararaja Iyengar, B.E. (Civil) (Mysore), A.M.I.E. (India),
 Mem. I.A.B.S.E.
 C. N. Nagaraj, B.Sc., B.E. (Mysore), D.I.C. (London), A.M.I.E.
 (India), Am. ASCE.

Lecturers :

- N. S. Lakshmana Rao, B.E. (Civil), A.I.I.Sc.
 B. V. Ranganathan, B.E. (Madras), M.Sc. (Engg.), D.I.C. (London).

Technical Assistant :

- D. N. Contractor, B.E. (Baroda).

Research Assistant :

- H. C. Parameswara, B.E. (Mysore). (Senior)

HIGH VOLTAGE ENGINEERING SECTION

Professor :

- D. J. Badkas, M.Sc. (Nagpur), A.I.I.Sc., A.M.I.E. (India), Mem.
 A.I.E.E.

Assistant Professor :

- H. V. Gopalakrishna, B.Sc., B.E. (Mysore), A.I.I.Sc., A.M.I.E.
 (India), A.Mem.A.I.E.E., A.M.I.E.E. (London), A.M.VDE.
 (Germany), Mem. CIGRE.

Lecturers :

- N. Narayan, B.E. (Elec.) (Mysore), A.M.I.E. (India), A.I.I.Sc.
B. N. Jayaram, B.E. (Elec.) (Mysore), D.I.I.Sc. (ECE), A.I.I.Sc.,
R. S. N. Rau, B.Sc. (Hons.) (Bombay), B.E. (Elec. & Mech.),
(Bombay).

Technical Assistant :

- V. T. Venkateswara Sarma, B.E. (Elec.) (Mysore).

Research Assistant :

- S. Balasubramanian, B.E. (Elec.) (Annamalai), (*Senior*).

DEPARTMENT OF ELECTRICAL COMMUNICATION
ENGINEERING

Professor and Head of the Department :

- K. Sreenivasan, B.Sc. (Mysore), A.I.I.Sc., M.I.E.E., Mem. A.I.E.E.,
S.M.I.R.E., F.A.Sc., M.I.T.E.

Line Communication Engineering :

- (Vacant).

Assistant Professors :

- B. S. Ramakrishna, B.Sc. (Andhra), M.Sc. (Banaras), Ph.D.
(Chicago), *Acoustics*.
S. K. Chatterjee, M.Sc. (Calcutta, S.M.I.R.E., *Radio*.
S. Sampath, B.Sc. (Hons.) (Madras), D.I.I.Sc. (E.C.E.), M.S.,
(Stanford), *Radio*.

Lecturers :

- K. Krishnan Nair, M.Sc. (Travancore), D.I.I.Sc. (E.C.E.), *Line
Communication*.
Mrs. R. Chatterjee, M.Sc. (Mysore), M.S.E. (Michigan), Ph.D.
(Michigan), *Radio*.
N. S. Nagaraja, B.Sc. (Hons.) (Mysore), D.I.I.Sc. (E.C.E.),
Radio.
V. N. Chiplunkar, M.Sc. (Nagpur), D.I.I.Sc. (E.C.E.) *Line
Communication*.
B. S. Atal, B.Sc. (Hons.) (Lucknow), D.I.I.Sc. (E.C.E.), *Acoustics*.
R. Sankar, M.A. (Maths.) (Delhi).

Technical Assistants :

C. S. Upadhyay, B.Sc. (Rajputana), D.I.I.Sc. (E.C.E.), *Electronics*,
 P. P. Gupta, B.Sc. (Hons.) (Delhi), D.I.I.Sc. (E.C.E.).

DEPARTMENT OF CHEMICAL TECHNOLOGY AND
 CHEMICAL ENGINEERING

Professor and Head of the Department :

E. Weingaertner, Dipl. Ing. (Darmstadt), Dr. Ing (Darmstadt).

Assistant Professor :

S. S. Ghosh, M.Sc. (Calcutta), D.Phil. (Calcutta), A.M.I.I. Chem.E.

Lecturers :

R. L. Datta, M.Sc. (Dacca), D.I.C. (London), Ph.D. (London),
 A.M.I.I.Chem.E.

G. N. Bhat, M.Sc. (Bombay), A.I.I.Sc., D.I.I.Sc. (Ch.E.),
 A.M.I.I.Chem.E., A.M.A.I.Ch.E.

C. B. Srikumar Varrier, B.E. (Chem.) (Annamalai), M.Sc. (Chem.)
 (Annamalai).

Research Assistants :

P. K. Deshpande, B.Sc. (Hons.) (Poona), A.I.I.Sc., D.I.I.Sc.,
 (Senior).

DEPARTMENT OF APPLIED MATHEMATICS

Professor :

P. L. Bhatnagar, M.Sc. (Maths.) (Agra), D.Phil. (Allahabad),
 D.Sc. (Allahabad), F.N.I., F.A.Sc.

Lecturer :

S. K. Lakshmana Rao, M.Sc., Ph.D. (Mysore).

SECTION OF ECONOMICS AND SOCIAL SCIENCES
 AND SECTION OF INDUSTRIAL ENGINEERING
 AND ADMINISTRATION

Professor and Head of the Section of Industrial Engineering and Administration :

R. Natarajan, B.A. (Science) (Madras), Dip. in Telephony (City &
 Guilds), M.I.E. (India), M.I.T.E., Fel. Inst. Directors (London),

Assistant Professors :

M. C. Munshi, M.A., D.Litt. (Bombay).

S. K. Bose, M.A., M.Sc. (Calcutta).

Research Assistants :

S. Srikantiah, B.A. (Hons.) (Mysore), M.A. (Mysore).

Jyothy Chandra Prakash, B.A. (Mysore), B.A. (Hons.) (Mysore).

LIBRARY

Librarian :

B. V. Raghavendra Rao, B.Sc. (Mysore), M.Sc. (Calcutta), D.Sc. (Madras), Dip.Lib.Sc. (Delhi).

MODERN EUROPEAN LANGUAGES

Lecturer :

Mrs. H. Kalé, Docteur-es-Lettres (Toulouse Univ., France), T.D. (München), D.Pr. (Rome).

Technical Assistant :

Miss G. Clairon, B.A. (Paris).

CENTRAL OFFICE

Accounts Officer :

B. S. Visweswaraiya, M.A. (Mysore), G.D.A. (Bombay), S.A.S. (Mysore).

Assistant Registrar :

S. S. Prabhu, B.A., B.L. (Madras).

Internal Auditor :

B. N. Doreswamy, B.Sc., S.A.S. (Central).

Personal Assistant to Director :

D. S. R. L. Narasimha Rao, B.Sc. (Andhra).

WORKS AND MAINTENANCE

Engineer-in-charge, Works and Maintenance :

V. S. Ramacharya, B.E. (Mysore).

CENTRAL STORES

Chief Store Keeper :

C. L. Narayanan, B.A. (Madras).

HOSTEL

Warden :

N. Kunchithapatham, M.A. (Madras).

DISPENSARY

Consulting Medical Officer :

M. N. Mahadevan, M.B.,B.S., D.T.M., M.R.C.P., F.R.F.P.S.

Resident Medical Officer :

T. B. Subba Rao, L.M.P. (Mysore).

NATIONAL CADET CORPS: INSTITUTE OF SCIENCE,
ELECTRICAL AND MECHANICAL ENGINEERING SECTION

Officer Commanding :

Capt. R. Sankaran.

Second in Command :

2/Lt. T. N. Krishnaswamy, B.E. (Elec.), B.E. (Mech.), Cert. of
Prof. in Aero-Engg. (I.I.Sc.), A.F.Ae.S.I.

INDIAN SCHOOL OF MINES AND APPLIED GEOLOGY

**Situated at Dhanbad in Bihar on the Eastern Railway,
Grand Chord Line**

MEMORANDUM OF INFORMATION REGARDING ADMISSION

The Indian School of Mines & Applied Geology provides instruction in Mining Engineering, Applied Geology, Petroleum Technology and Applied Geophysics. The following courses are offered:—

A four-year course is offered in each of the above four subjects, leading to the Diploma of Associateship of the Indian School of Mines (A.I.S.M.).

In addition, Mining students may also obtain B.Sc. (Honours) in Mining of the Bihar University by examination and M.Sc. in Mining by presentation of thesis; the Geology students may obtain B.Sc. (Honours) and M.Sc. in Applied Geology of the Bihar University by examination.

NOTE:—(i) A student who has obtained the Diploma of Associateship in Applied Geology may be allowed to take the examination for the Diploma of Associateship in Mining Engineering after an additional period of study of one year in the case of those who were admitted in the 1st year Geology course on the results of the Entrance Examination and two years in the case of those directly admitted to the 2nd Year Geology Course, provided he can show evidence of at least 6 months' practical experience in a mine.

(ii) A student who has obtained the Diploma of Associateship in Mining Engineering may be allowed to take the examination for the Diploma of Associateship in Applied Geology after an additional year of study, provided he can show evidence of having carried out Geological field work or prospecting (during period other than the school sessions) for a total period of not less than 4½ months—practical experience in a mine may be submitted for not more than half of this period.

Application Forms for Admission — Obtainable gratis before the end of February, on sending a stamped and addressed envelope, from the Registrar, to be returned complete in every respect by registered

post with acknowledgement due to reach his Office on or before 7th March. Application received after the due date will be rejected. (It is advisable to submit applications earlier). It is not possible to acknowledge individual applications. Every application for admission MUST be accompanied by the following; otherwise it will be rejected.

(a) Official certificate showing that the candidate has passed

(i) the Intermediate Examination in Arts or Science of an Indian University or an Examination recognised as equivalent thereto with ENGLISH, MATHEMATICS, PHYSICS and CHEMISTRY (no alternatives are acceptable);

Note : Students from Osmania University are not required to pass the additional test in Theology or Morals for the purpose of this regulation; or

(ii) the Higher School Certificate Examination of the Cambridge Local Examinations Syndicate with Group III (Mathematics) or Group I (Natural Sciences); or in the case of Matriculates—

(iii) the Final Examination after a full three years' course at the West Bengal or Bihar Evening Mining Classes (Non-Matriculates are not eligible); or

(iv) the London University Matriculation in the subjects of English, Mathematics, Physics and Chemistry; or

(v) Pre-Engineering Examination of the Delhi Polytechnic or any other institutions; or

(vi) the first year examination of the three years' degree course in Arts or Science of a University after passing the Higher Secondary Examination of the Board of Higher Secondary Examinations, or the Qualifying Examination conducted by a University or any other examination recognised as equivalent provided the subjects English, Mathematics, Physics and Chemistry are covered in one or other of these two Examinations, or these examinations taken together.

Note : Any candidate who has appeared or intends to appear at one of the above examinations, but has not been informed of the result may apply for admission. His application will be accepted provisionally and he will be permitted to take the Entrance Examination if he is otherwise eligible. He will be required to furnish before admission a certificate from the head of his college or any other satisfactory evidence of having passed one of the examinations specified above.

(b) A certificate of good character granted by the head of the college at which the applicant has been educated during the two years immediately preceding his application for admission.

(c) One foolscap sheet of specimen handwriting of the candidate under his signature such as is normally written by him at an examination.

(d) Two passport size photographs of the candidate (not returnable).

Photo must indicate the name.

Note : (1) Copies of certificates attested by a Government Gazetted Officer will be accepted, except for the certificate required by rule (b) which must be produced in original.

Note : (2) The applications received without the above documents, i.e., (a) to (d) as well as without the Treasury Challan for Rs. 10, will be rejected.

PROSPECTUS

Available on payment from the Manager of Publications, Civil Lines, Delhi, or from Hony. Secretary, I.S.M.A.G. Co-operative Stores Ltd., P.O. Indian School of Mines, Dhanbad (Bihar). Cost fixed after publication of the Prospectus each year.

ADMISSION

All candidates for admission to the First year course MUST sit for the Entrance Examination and MUST NOT be over 22 years of age on 1st January of the year of admission (25 years in case of Scheduled Caste and Scheduled Tribe candidates).

Candidates who are successful at the Entrance Examination should produce a medical certificate of fitness from a Registered Medical Practitioner. Acceptance of this certificate is subject to checking by the Medical Officer of this Institution.

Candidates who have passed the B.Sc. degree with Geology may be admitted direct into the Second Year Geology class on the following conditions :—

1. They must have passed the Intermediate Examination with English, Mathematics, Physics and Chemistry ;
2. They will be allowed to take up only the Geology and not Mining course ;
3. The admission is subject to a seat being available ;
4. They will not be eligible for any scholarship unless they sit for the Entrance Examination ;
5. They must also apply in the prescribed form on or before 7th March.
6. The fee of Rs. 10 is to be deposited only in the event of one deciding to sit for the Entrance Examination ;
7. I.Sc. and B.Sc. mark sheets are to be submitted before they can be admitted.
8. They will also have to produce a medical certificate of fitness in the case of First Year students.

Entrance Examination (Competitive) will be held each year at the end of April or the beginning of May at some, but not necessarily all of the following centres (Examination dates will be intimated to candidates in due course) :—

Dhanbad, Calcutta, Bombay, Madras, Delhi, Nagpur, Patna, Lucknow, Cuttack.

Candidates are advised to give the names of two centres in the application form in order of preference (change to any other centre is not permitted). Minimum fee Rs. 10 (not refundable in any circumstances) to be paid by the candidates direct into the nearest Government Treasury to the credit of "XXXVI—Miscellaneous Departments—Miscellaneous—Miscellaneous receipts of Indian School of Mines, Dhanbad." The fee may also be sent by Indian Postal Order for Rs. 10/- payable at Dhanbad to the Director, Indian School of Mines & Applied Geology. The receipt must be sent along with the Application Form and other necessary forms and certificates to the Registrar. CANDIDATES MUST NOT SEND CASH, MONEY ORDERS, OR BANK DRAFTS. For old question papers, you may write to the Hony. Secretary, I.S.M.A.G. Co-operative Stores Ltd., P.O. Indian School of Mines, Dhanbad (Bihar). The examination papers are of the I.Sc. standard approximately. Candidates must sit in all four subjects, viz, English, Mathematics, Physics and Chemistry. The English paper includes essay and precis writing and general knowledge. No exemption is granted. The results of the examination are generally out by the end of June. All individual selected candidates are, in due course, informed of the result. Candidates who may not hear anything by 30th June should assume that they have not been selected for admission.

Session :—1st July to 31st March.

Tuition Fees :—Rs. 180 per year. (Payable in two instalments, first instalment on the opening day along with the acceptance of admission in case of First year students and the second instalment on the first working day of December).

Sports Club :—Entrance fee Rs. 5 (once only during the whole course) payable on the opening day. Subscription Rs. 20 per year (compulsory) payable in two instalments, first instalment on the opening day and the second instalment on the first working day of December. These sums are liable to increase on account of cost of sports articles.

Caution Money :—Rs. 75 (refundable at the end of the course after necessary deductions) payable along with the acceptance of admission.

Magazine Fee :—Rs. 3 per annum payable on the opening day.

Part I Diploma Examination Fee :—Rs. 25 payable on the first working day of February.

Part II Diploma Examination Fee:—Rs. 40 payable on the first working day of February.

Hostel Charges:—Rs. 8.75 per month including electric charges, payable on the first working day of every month.

Note: The dates of payment of the various dues will be strictly observed, but to avoid undue congestion at the Cashier's desk students are generally allowed up to the 15th or the last working day before the 15th of the month. A fine becomes payable with effect from the next day. Students and guardians are requested to note that payment of college dues will not, in any circumstance, depend upon receipt of scholarships.

The defaulters' names are struck off at the end of a month and they may be readmitted only on payment of the readmission fee of Rs. 10.

Mess Charges:—Messes are managed by students themselves and expenses vary from Rs. 60 to Rs. 70 per month at present.

Concession to Scheduled Caste and Scheduled Tribe Students:—Four seats are reserved for Scheduled Caste and Scheduled Tribe candidates. Two of the Scheduled Caste and Scheduled Tribe candidates allotted the reserved seats may be exempted from payment of tuition fees, but not from any other Regulations regarding admission.

Scholarships:—The Government of India award five scholarships of the value of Rs. 40 per month each in the First, Second and Third Year Courses and five in the Fourth Year Courses. Of these, two are reserved for Scheduled Caste and Scheduled Tribe candidates in each of the courses. No application is required for Government of India scholarships. Other Governments also award scholarships regarding which information may be obtained from the Director of Industries or the Director of Development concerned.

All communications should be addressed as follows:—

“THE REGISTRAR, INDIAN SCHOOL OF MINES AND APPLIED GEOLOGY, DHANBAD, E. RAILWAY.”

Telegraphic Address: “SCOLOMIN, DHANBAD.”

For application forms, etc., please apply by the middle of January to the Registrar sending a stamped and addressed envelope.

All communications from Pakistan should be sent through the Government of Pakistan to the Government of India (Ministry of Education and Scientific Research, New Delhi).

SPECIAL NOTE:—(1) Neither the Government of India nor the School authorities are legally responsible for any errors or omissions.

(2) Government reserve the right to alter the rules and regulations at any time without notice.

INSTITUTE OF NUCLEAR PHYSICS

The Institute has grown out of the Research Laboratory of Professor Meghnad Saha as the Palit Professor of Physics of the Calcutta University.

Professor Saha early realised the importance of atomic research and in 1940, immediately after Professor Otto Hahn discovered "Fission", he drew the attention of the Indian people to the future of this great discovery through several articles in leading scientific and popular journals. The authorities of the Calcutta University took up the suggestion of Prof. Saha and introduced 'Nuclear Physics' as one of the special subjects for the M.Sc. course in physics in 1941 and Prof. Saha began organising the Palit Research Laboratory for teaching and research on Nuclear Physics. It is interesting to note that under Prof. Saha's inspiration the first original contributions in this new science came from his laboratory in 1940. His own paper in 'systematics of nuclei' came soon after. He was therefore truly one of the pioneers in nuclear science in India.

Pandit Jawaharlal Nehru, the then Chairman of the National Planning Committee of the Indian National Congress, helped the Calcutta University to procure a donation of Rs. 60,000/- from the Dorabji Tata Trusts to purchase parts of a cyclotron machine and arrangements for constructing and housing the machine was taken up with an equal amount of money supplemented by the Calcutta University. A small two-storied building of covered area of about 4,000 sq. ft. was built at a cost of Rs. 30,000/- only for housing the cyclotron.

Dr. B. D. Nag Chaudhuri, who was then working at the Radiation Laboratory, California with Prof. E. O. Lawrence, the inventor of the cyclotron was authorised by the Calcutta University to purchase the necessary components of a cyclotron. Dr. Nag Chaudhuri returned to India and joined the Calcutta University as the Cyclotron officer. A substantial part of the components which were shipped from America during the latter part of World War II was lost in transit. With grants from the C.S.I.R. many of these were designed and manufactured in the workshop of the Institute leaving the rest to be imported after the cessation of hostilities.

Gradually through the untiring efforts of Prof. Saha, public donations began to come in for researches in various branches of Nuclear Physics. Mr. T. C. Sur donated a sum of Rs. 2.00 lakhs for creating a 'Readership' in Nuclear Physics, Messrs. Birla Brothers Rs. 60,000/-

for biophysical researches, Dr. B. C. Law Rs. 17,500/- for an electron microscope and Rai Bahadur R. P. Shaha Rs. 45,000/- for 1 gramme of radium.

Immediately after the National Government was formed, Prof. Saha was able, through the good offices of Dr. S. S. Bhatnagar, to procure grants — capital and recurring — from the Central Government. Necessary components were purchased for the cyclotron and by the middle of 1950, the cyclotron was put into operation.

Want of space was being felt since as early as 1945 and in 1947, Dr. P. N. Banerjee, the then Vice-Chancellor of the Calcutta University arranged for a loan of Rs. 2.00 lakhs from the Sur Fund for the construction of a building. The Central Government was kind enough to provide a sum of Rs. 3.50 lakhs, and a three storied building of covered area of about 25,000 sq. ft. was built. The land for this building as well as the previous one for housing the cyclotron was made available by the Calcutta University in their premises of the University Colleges of Science & Technology at 92, Upper Circular Road. In 1950, the Atomic Energy Commission made a further contribution of Rs. 1.2 lakhs for furniture, fittings and services.

The foundation stone of the new building was laid on April 21, 1948 by Dr. S. P. Mookherjee, then Minister in the Central Government. The Institute was formerly opened on January 11, 1950 by Prof. Madame Joliot Curie, in the presence of a solemn gathering amongst which her husband Prof. Joliot Curie, Lady and Sir Robert Robinson, Prof. J. D. Bernal and many other distinguished scientists were present. His Excellency Dr. K. N. Katju, Governor of West Bengal presided over the function.

By a mutual agreement between the Calcutta University and the Government of India, the Institute was constituted into an autonomous body under the joint control of the Government of India and the Calcutta University and the Constitution & Rules of the Institute were passed by the Senate of the Calcutta University on May 12, 1951. A Governing Body composed of representatives of the Calcutta University, the Government of India and the Inter-University Board administers the Institute. The Vice-Chancellor of the Calcutta University is the ex-officio Chairman of the Governing Body. Prof. Meghnad Saha was a life member of the Governing Body and was the Honorary Director of the Institute, until his untimely demise.

The activities of the Institute are at present divided into the following divisions :—

1. Administrative Division comprising of the General Administration, the Library and the Workshop.
2. Accelerator Division comprising of the Cyclotron, Mass Spectroscopy and Electron Synchrotron laboratories.

3. Nuclear Physics Division comprising of Beta and Gamma-ray spectroscopy and Nuclear Induction, Theoretical Physics, Teaching, Neutron Physics and Instrumentation Sections and laboratories.
4. Nuclear Chemistry Division comprising of Inorganic, Analytical and Physical Chemistry laboratories.
5. Biophysics Division comprising of Electron Microscopy and Tracer Study laboratories.

The Government of India in the Department of Atomic Energy sanctioned to the Institute (excluding its Biophysics Division) a sum of Rs. 57 lakhs grant-in-aid during the 5-year period 1955-56 to 1959-60. Of this Rs. 3 lakhs have been sanctioned for the extension of the existing building area to accommodate new apparatus, etc.

The Biophysics Division of the Institute is financed by the Ministry of Education of the Government of India and negotiations are going on for a 5-year development programme of the Division.

The Calcutta University has made available to the Institute the services of the Palit Professor of Physics, his laboratory and office staff and the Tarini Charan Sur Reader in Nuclear Physics in addition to giving an annual recurring grant of about Rs. 60,000. The Palit Professor and the Sur Reader continue to be teachers in the Pure Physics Department of the University in addition to their duties at the Institute.

Since research in any field is closely allied to teaching, Prof. Saha maintained that in addition to the objective of carrying on research in nuclear science in its various aspects, the development programme of the Institute should include teaching of nuclear science to advanced students of three categories :—

- (a) Teaching (including laboratory work) as compulsory subject of Nuclear Physics to the M.Sc. students of the Calcutta University.
- (b) Teaching (including laboratory work) the special subject of Nuclear Physics to the M.Sc. students of the Calcutta University.
- (c) Teaching (including laboratory work) according to the syllabus of an one-year Post-M.Sc. Associateship course of the Institute.

Nuclear Physics is one of the compulsory subjects included in the syllabus for the M.Sc. degree in Physics of the Calcutta University. Every student going in for the final examination has to read the subject and carry on some fundamental experiments. In addition to this about 16 students are allowed to take the 'Special Paper' on Nuclear Physics. They have to read (as per the syllabus of the Calcutta University), Nuclear Physics as an advanced subject which includes some advanced experiments also.

It was felt in course of teaching the M.Sc. students that further training was necessary if the students were to employ the knowledge usefully in research or in profession. There is no doubt that the training of personnel is important just now and is likely to remain so for some time to come. At the suggestion of our Prime Minister, the Institute of Nuclear Physics drew up a scheme of advanced Post-M.Sc. training for one year in nuclear science open to students from all parts of India. The Post-M.Sc. one year course open to 20 students from all over India was started from 1953 and in the last four years 49 students have been awarded Associateship diploma.

The proposal of having a hostel for the students was approved by the Government of India and an interest free loan of Rs. 1.65 lakhs was made available to the Institute for its construction.

The Government of West Bengal also sanctioned an interest free loan of Rs. 60,000 for purchasing a plot of land for the hostel building contiguous to the premises of the Colleges of Science & Technology of the Calcutta University.

The foundation stone of the hostel building was laid on January 19, 1956 by Sri K. D. Malaviya, Minister in the Central Government. The construction of the hostel has been completed and the students are now living in it.

STAFF

Administrative Division.

<i>Actg. Director :</i>	Prof. B. D. Nag Chaudhuri.
<i>Registrar :</i>	Sri H. K. Basu.
<i>Accountant :</i>	Sri N. Krishna Moorthy.
<i>Librarian :</i>	Smt. P. Parvathi.
<i>Workshop Superintendent :</i>	Sri G. N. Sarkar.

Accelerator Division.

Palit Professor of Physics, Calcutta

<i>University, Head of the Division :</i>	Prof. B. D. Nag Chaudhuri.
<i>Reader in Experimental Physics :</i>	Sri A. P. Patro.
<i>Lecturers in Experimental Physics :</i>	Sri S. K. Mukherjee.
	Sri M. N. Viswesvariah.
<i>Senior Research Assistant :</i>	Dr. A. Chatterjee.
<i>Research Assistants :</i>	Sri P. K. Dutta.
	Sri B. Basu.
	Sri S. Mahapatra.
	Sri S. B. Kar Mahapatra.
	Sri Rama Rao.
	Sri S. K. Mazumder.

Nuclear Physics Division.

<i>Professor and Head of the Division :</i>	Prof. A. K. Saha.
<i>Reader in Nuclear Physics :</i>	Dr. T. P. Das.
<i>Lecturer :</i>	Sri D. K. Roy.
<i>Research Assistants :</i>	Sri M. K. Pal, Sri S. K. Ghosh Roy, Sri A. K. Sen Gupta, Smt. T. Ghosh.
<i>Reader in Theoretical Physics :</i>	Dr. M. K. Banerjee.
<i>Research Assistant :</i>	Sri S. Mukherjee.
<i>Reader in Nuclear Physics, In-charge of Teaching Section :</i>	Dr. S. Chatterjee.
<i>Lecturers :</i>	Dr. R. K. Das. Sri R. L. Bhattacharyya.
<i>Research Assistants :</i>	Sri A. N. Saxena, Sri B. B. Baliga.
<i>Reader and Head of the Instrumentation Section :</i>	Sri B. M. Banerjee.
<i>Lecturer :</i>	Dr. R. N. Roy.
<i>Research Assistants :</i>	Sri J. K. Das Verma, Sri S. C. Nath, Sri K. S. Patel.

Nuclear Chemistry Division

<i>Reader and Head of the Nuclear Chemistry Division :</i>	Sri B. C. Purkayastha.
<i>Lecturer :</i>	Dr. S. K. Nandi.
<i>Research Assistants :</i>	Sri V. R. Pai Vernekar, Sri S. N. Bhattacharyya, Sri M. Ganguly.

Biophysics Division.

<i>Professor and Head of the Biophysics Division :</i>	Prof. N. N. Das Gupta.
<i>Lecturers :</i>	Dr. B. B. Sen. Sri M. L. De, Dr. A. Guha (on leave).
	Sri R. K. Poddar.
<i>Research Assistants :</i>	Sri C. K. Pyne, Sri S. N. Chatterjee.

INDIAN STATISTICAL INSTITUTE

INTRODUCTION

The Indian Statistical Institute was founded on 17th December 1931 and was formally registered under the Indian Societies Registration Act No. XXI of 1860 on 28th April 1932 with headquarters in Calcutta. The Institute had its origin in and was continuation of the Statistical Laboratory which began its work informally 14 or 15 years earlier in the Presidency College, Calcutta. Since 1951, the headquarters of the Institute is at 203 Barrackpore Trunk Road, Calcutta-35. Its objects are :—

1. To promote the study of statistics both pure and applied and allied subjects, and
3. To provide for research and instruction for the advancement of the study and dissemination of knowledge of statistics and allied subjects.

Membership and Management.

The membership of the Institute and its constituent bodies shall be open to all persons irrespective of sex, nationality, race, creed or class.

The Institute shall not distribute any part of its income or profit as dividend, gift, or bonus or in any other way among its members, provided nevertheless that office-bearers, workers and other employees shall not be debarred from receiving remuneration or participating in grants because of their also being members of the Institute.

Membership of the Institute comprises student members, sessional members, ordinary and life members, fellows, honorary members and patrons. The supreme control including the power of making rules is vested in the members in General Meeting assembled. The Chairman and other office-bearers are elected annually. The management of the affairs of the Institute is in the hands of the Council elected annually by the members of the Institute.

Membership fee, Rs. 20 (foreign Rs. 25) per year for ordinary members and Rs. 250 for life members includes subscription to *Sankhya*, the Indian Journal of Statistics.

SUMMARY OF ACTIVITIES AND AMENITIES

A brief description of the Institute's staff, various divisions, equipment and amenities available to students is given below :—

Staff :

The Indian Statistical Institute has a highly qualified teaching and research staff including specialists in different branches of statistics such as Mathematical statistics, Statistical inference, Advanced probability, Sample surveys, Quality control, Economics of Planning, Psychometry, Biometry, Actuarial statistics, Demography and Design of experiments, some of whom have won international recognition.

Besides statisticians, there are competent mathematicians, economists, biologists, psychologists, demographers, engineers and specialists in other scientific fields working on different projects.

Visiting Professors :

Since 1938 the Indian Statistical Institute has been inviting distinguished scientists from abroad to come to the Institute as visiting professors and give courses of lectures and conduct seminars. They are also available for consultation by research students and trainees. Visits by foreign experts, are not only of considerable benefit to the Institute and its workers, but have contributed to wider knowledge and appreciation of work of the Institute outside India. The number of visiting professors during the two years (1955-1957) was about 50 including such eminent persons as Ronald A. Fisher (U.K.), Norbert Wiener (U.S.A.), J. B. S. Haldane (U.K.), T. Kitagawa (Japan), M. Masuyama (Japan), Y. U. Linnik (U.S.S.R.), C. Bettelheim (France), J. S. Neyman (U.S.A.), Ragner Frisch (Norway), Walter Shewhart (U.S.A.), Oskar Lange (Poland), G. A. Barnard (U.K.), J. Tinbergen (Netherlands).

The Institute also maintains contact with the Indian universities and statistical organisations and invite their statisticians to visit and participate in the work of the Institute.

Guest Lectures :

From time to time International experts who happen to be in India are invited to give lectures or participate in scientific discussions.

The Research and Training School :

The Research and teaching activities of the Indian Statistical Institute over the several years had gradually led to the development of a Research and Professional Training School (R.T.S.) in the Institute, which is in charge of research and training.

In research by the R.T.S., there is emphasis on theoretical studies based on the foundation of probability and the logic of statistical inference and at the same time much attention is given to research in applied statistics and the application of statistical methods in various fields.

For applied research there are four units attached to the R.T.S. :
(i) Biometry unit, (ii) Psychometry unit, (iii) Anthropometric unit, and (iv) Operational Research group.

The School conducts about nine courses at different levels giving training for about 400 individuals per year.

In addition to teaching and research, the R.T.S. provides advice and other technical services with regard to planning investigations, processing of data and interpretation of results, to workers from all parts of the country who seek assistance.

Project Division :

The main activity of this division is fact-finding involving the operations of collection, compilation, scrutiny, tabulation and analysis of data relating to large-scale projects. Research is conducted on the design of large-scale sample projects. Research is with or without the design of large-scale sample surveys, organisation, sample selection, schedule design, various measurement problems including response bias, methods and costs and on the subject content of surveys. Efficient methods of processing the data in the laboratory are continuously explored.

The Project Division is in technical charge of the statistical work of the National Sample Survey (N.S.S.) the country-wide continuing sample survey project of the Government of India, probably the largest of its kind in the whole world, which offers unique facilities for training in applied work.

Planning Division :

This Division carries out investigations of problems relating to planning for national development. Emphasis is laid on securing basic information, construction of economic models and methods of adopting them for planning.

Demography Unit :

This unit is engaged in demographic research studies. Supplementing the demographic investigations made through the N.S.S., the unit conducts special surveys on different aspects of demography.

I.M.R.U.P. :

The Industrial Management Research Unit for Planning is a special unit set up by the Institute, with headquarters at Bangalore, to study problems of industrial management in both the public and private sectors of Indian economy.

Statistical Quality Control (S.Q.C.) Units :

From early days the Indian Statistical Institute has been taking an active part in the promotion of Statistical Quality Control in Indian industries. The Institute has established full-time S.Q.C. units in different parts of the country (Bombay, Bangalore and Calcutta). In these units a number of S.Q.C. statisticians are engaged, carrying out

in close co-operation with various manufacturing industries, (i) training in S.Q.C. techniques, (ii) in-factory work and consultation, and (iii) promotion of S.Q.C. S.Q.C. experts from abroad are periodically enlisted to help these units. Among such experts who have recently visited India are: W. A. Shewhart, the originator of S.Q.C. (U.S.A.), D. J. Desmond (U.K.), T. Hanada (Japan), G. Taguchi (Japan), G. A. Barnard (U.K.), E. R. Ott (U.S.A.).

Computation Laboratories :

The Institute possesses a large number of calculating machines, instruments and accessories and various statistical tables and aids to computation. Extensive facilities are available for tabulation and technical computation by punched card methods.

Punched Card Machines :

At present (1957) the Institute has 165 punchers and verifiers, 20 sorters, 13 tabulators, 6 reproducers, 10 summary punchers, 4 collators, 4 calculating punches and 1 electronic statistical machine, of the Hollerith, I.B.M., Powers Samas or Russian types. There are further plans of expanding the mechanical tabulation section, which is already the biggest installation in India.

Electronic Laboratory :

There is a modern Electronic Laboratory where work is proceeding on high-speed electronic computers. One electrical analogue computing machine of a novel design was constructed in 1953 to solve linear equations for obtaining latent roots or vectors of a tenth order matrix. The construction of a fully automatic electronic digital computer is making progress.

Library :

The Indian Statistical Institute contains a large collection of books on statistics, and allied subjects comprising more than 60,000 volumes. It also receives regularly from various countries statistical journals, reports and abstracts numbering about 1,200.

Photographic Section :

Attached to the Library is also a photographic section with micro-film, photostat and other equipments.

Field Section :

The Institute has a field section of its own with a staff of about 180 investigators and supervisors. This staff collects information relating to a number of special enquiries in and around Calcutta. This section also organises programmes of field work for training purposes.

Agricultural Farm at Giridih :

There is a 35-acre farm at Giridih where the Institute has an operating branch. The farm conducts crop-cutting and other agricultural experiments.

Kalyanashree :

This is an industrial work unit for studying the economics of small-scale household industries and handicrafts.

Workshop :

The workshop of the Institute designs, manufactures and services desk calculating machines, where students can gain insight into manufacturing methods and workshop practice. The workshop has recently constructed a hand calculating machine and a punched card sorter and it is making arrangement for production on a moderately large scale.

"Sankhya" and the Printing Press :

There is a printing press associated with the Institute, equipped with Monotype and other printing devices, where the Institute's journal, *Sankhya*, schedules, reports and other technical publications are printed. *Sankhya*—the Indian Journal of Statistics, is being published since June 1933 by the Statistical Publishing Society as the official organ of and in co-operation with the Indian Statistical Institute. Besides articles on theoretical and applied statistics, bibliographies of Indian statistical publications, numerical tables tending to reduce the labour of computations and book reviews are published in the journal. Contributions are welcome from all parts of the world. The journal is supplied free to the members of the Institute, and the subscription for non-members is Rs. 30 in India and 60 shillings or 10 dollars outside India.

Social and Welfare Section :

This section is responsible for providing workers and students of the Institute, housing, medical, canteen, club and other amenities. There is also a guest house and international hostel for the benefit of visitors.

International Centre :

In 1950 an International Statistical Education Centre was started at the Indian Statistical Institute in collaboration with the International Statistical Institute, under the auspices of the UNESCO and the Government of India. Courses of professional training are provided at this Centre for prospective statisticians from Asian countries. The courses cover a period of one academic year (July to April). A limited number of Indian students deputed by the Central and State Governments and recognised institutions are also admitted to the courses. Eleven terms have been held upto 1957 giving training to more than 275 students from 17 Asian countries.

Examinations :

The Institute conducts three examinations annually for the award of (1) the Statistician's Diploma, (2) the Computer's Certificate, Parts I and II, and (3) Certificate for Field Survey (Senior and Junior). The examinations are open to all persons fulfilling certain minimum requirements. The total number taking these examinations was 696 in 1956-1957.

Financial arrangements :

The Institute received in 1956-1957 a block grant of about Rs. 9 lakhs for the Research and Training School from the Government of India and between 56 and 57 lakhs for statistical projects undertaken on behalf of Government. Besides, there has been some income from membership fees, examination fees, etc.

RESEARCH AND TRAINING COURSES

The Research and Training School (R.T.S.) which is maintained largely by a grant from the Government of India, and is administered since 1952 by the Governing Body consisting of members elected by the Council of the Institute, and representatives of the Government of India, the Inter-University Board, the Indian Economic Association, Federation of Indian Chambers of Commerce and Industry, the Associated Chambers of Commerce of India, the National Institute of Sciences and the Reserve Bank of India.

The different courses provided by the R.T.S. are :—

1. Research and Advanced Studies (individual basis),
2. One-year Apprentice Training (in collaboration with Central Statistical Organisation),
3. Three-year Professional Statisticians Training (in collaboration with C.S.O.),
4. Short-term Training for Statisticians (Junior and Senior),
5. Training at the International Statistical Education Centre,
6. Officer's Training (jointly with the C.S.O.),
7. Special Short-duration individual training for officers on deputation,
8. Training for computers (Junior and Senior), and
9. Intensive courses on special subjects (occasional).

A brief description of each of the courses is given below. Fuller details, prospectus, syllabuses, etc., are available on application to the Registrar.

Research and Advanced Studies :

A limited number of research students are admitted to the Institute from time to time to work on research problems in different bran-

ches of statistics, such as Advanced probability, Stochastic processes, Statistical inference, Sample surveys, Design of Experiments, Multi-variate analysis, Statistical Quality Control, Econometrics and Economic planning, Psychometry, Biometric methods including Probit analysis and Biological assays, Electronic computations, etc. Only candidates with high academic qualification and showing evidence of research abilities and a satisfactory record of previous research work in statistics, mathematics or associated subjects are admitted as research students. Admissions are made according to the merit of candidates, on the basis of previous qualification, written tests and *viva voce*.

Research scholarships are awarded to deserving candidates at the rate of Rs. 200 or Rs. 250 to junior workers and Rs. 300 or Rs. 350 to senior workers. In special cases, research fellowships of higher value will also be offered. Research students are first taken for a period of six months. The continuance of the scholarship in any individual case will depend on the progress made. Research students can register for doctoral or other degrees with any university or institution which recognises research done at the Indian Statistical Institute under the supervision of a staff member and submit a dissertation for the award of the degree. Besides, on the basis of research done and professional work carried out at the Institute, a person could be admitted to the following:—

1. Associateship of the Indian Statistical Institute (A.I.S.I.),
2. Associate Fellowship of the Indian Statistical Institute (A.F.I.S.I.), and
3. Fellowship of the Indian Statistical Institute (F.I.S.).

Particulars are given in the relevant bye-laws.

One-year Apprentice Course :

A limited number of apprentice-trainees will be admitted from time to time to this course. The purpose of the course is to provide persons with appropriate qualifications, opportunities for work-experience in different branches of statistics. Candidates admitted to this course will be assigned specific duties in the different sections or units of the Institute or in other offices in collaboration with the Central Statistical Organisation of the Government of India, under the guidance of supervisors. The training received by them will be mainly on-the-job in character. Trainees may also be required to attend lectures and practical classes as necessary. Candidates desiring to go through advanced theoretical and professional training should, instead of this course, take the Three-year Statistician's Course for which direct admission to the Second year class is also possible. The minimum qualification for admission to the course is a Master's (or three-year honours) degree or Diploma in Statistics. Admission to the course will be based on selection tests. Trainees admitted to the course will be given monthly

stipends varying in amount from Rs. 100 to Rs. 200. The work of each trainee will be reviewed periodically and in the event of unsatisfactory performance a stipend awarded may be reduced in value or withdrawn, or the trainee may be asked to discontinue.

Three-year Statistician's Training Course :

This course is intended to provide comprehensive training for the making of professional statisticians. It covers all important branches of statistics and places emphasis on imparting theoretical knowledge of a high order and at the same time equipping trainees with the necessary professional competence in special fields of application. The basic and the specialised courses are designed to satisfy the requirements of persons who are to take up responsible statistical posts in Government departments, financial, commercial or industrial organisations and scientific educational institutions. The training extends over a period of three years. The session commences in July every year and continues through the three years with short recesses in June. Admission to the course is solely based on the merit of candidates. For this purpose the candidate should provide complete details of qualifications in the application form for admission supplied free on request. The minimum qualification for admission is any one of the following :—

1. M.A., M.Sc., three year B.A. Honours or three year B.Sc. Honours degree in Statistics, Mathematics, or natural and social sciences with knowledge of Mathematics.
2. Statistician's Diploma of the Indian Statistical Institute.
3. Degree in any branch of engineering.
4. Specialised research and/or technical and applied work in statistics.

Candidates holding high M.A., M.Sc., or three-year Honours or equivalent degrees in Statistics or with good performance at the Statistician's Diploma examination of the Indian Statistical Institute may be given one year's exemption and admitted to the Second year of the course, if they pass the qualifying tests (written and viva) held for this purpose.

Students admitted to the course are not required to pay any fees for the training.

Each trainee admitted to the First year class will receive Rs. 75 per month for a trial period of 3 months, at the end of which a careful assessment of his performance in tutorial classes, periodical and special tests will be made. If after assessment he is allowed to continue the course, he will receive a stipend of Rs. 120 per month during the remaining part of the year. Those found not suitable after the trial period will not ordinarily be allowed to continue the course. Trainees admitted to the second and third year classes will be paid monthly stipends

ranging from Rs. 120/- to Rs. 250/- depending on individual performance. Those admitted to these classes on trial will, however, receive only Rs. 100/- during the trial period. A stipend awarded may be withdrawn if the subsequent performance of the candidate is considered not satisfactory. Out of the stipend granted for each trainee, Rs. 150/- will be set apart for the purchase of books during the year.

The training comprises lectures, laboratory work, tutorials and assisted reading, seminar discussions, visits and demonstrations, in-service training and participation in large-scale applied work. The detailed syllabus for the course together with list of books recommended is available separately.

Besides periodic tests, there are mid-term and final examinations every year. A candidate may be detained in any year or asked to discontinue the course if the grades obtained by him in the examinations are found to be unsatisfactory. The final award of the certificate of training is made at the end of the third year to the successful candidates.

After completing the training any candidate can proceed to secure the Associateship of the Indian Statistical Institute after one year of independent professional work, by submitting a report of his work. For details, reference should be made to the Bye-laws for award of Associateships.

Short-term Statistician's courses (Junior and Senior) :

The Junior course is intended to provide a basic training in statistical methods and their application to different fields, and the senior course to cover advanced statistical theory and applications to different fields at a level of specialisation. These courses are designed to satisfy the requirements of persons who are to take up statistical responsibilities in government departments, commercial organisations etc. Candidates intending to appear at the Statistician's Diploma Examination of the Institute will find these courses useful.

Each of the junior and senior courses extends over a period of six months. Ordinarily, there will be two sessions for each course in a year, one from the middle of March to the middle of September and the second from the middle of September to the middle of March.

Admission to these courses is based on the merit of candidates. For this purpose, candidates should provide complete details of qualification in the prescribed application form for admission. Those who are successful at a preliminary selection which will be based on academic qualification and previous experience will be required to appear at written tests held at specified places in different parts of the country. No travelling allowance will be paid for this purpose. Selection for admission to the junior and senior courses are made independently

and a person completing the junior course is not necessarily entitled to admission to the senior course.

The minimum qualification for admission to the Junior Course is any one of the following :—

1. a university degree (preference will be given to candidates with knowledge of mathematics),
2. Computer's Certificate parts 2 A and 2 B of the Indian Statistical Institute,
3. experience in statistical work for more than three years in the Indian Statistical Institute or any other recognised statistical office or laboratory.

The minimum qualification for admission to the Senior course is any one of the following :—

1. an honours degree in statistics,
2. certificate of having passed in at least the General papers (including practical) of the Statistician's Diploma examination of the Indian Statistical Institute or an equivalent qualification.
3. a certificate of completion of the junior course of the short-term statistician's training.

Students admitted to these courses are not required to pay any tuition fee. But a machine-fee of Rs. 80/- (to be paid at the time of admission), which includes the price of the hand book for practical work, will be charged for each of the junior and senior courses.

Courses at the International Statistical Centre :

This Centre is maintained (by collaboration between the International Statistical Institute and the Indian Statistical Institute with the support of the United Nations, the Specialized Agencies and the Government of India) with the purpose of providing courses in theoretical and applied statistics at various levels to participants from countries of the Middle, South and Far East. The Centre normally provides courses for three distinct types of persons. Course A—teachers of statistics; Course B—officials (from government departments or commercial, financial, etc. organisations) who have experience in statistical work; and Course C—officials without experience in statistical work.

The term begins every year in July and extends over a period of one academic year. Announcement of the different terms and curriculum for the course are officially circulated in different countries.

Officer's Training Course :

The Central Statistical Organisation (Government of India) jointly with the Indian Statistical Institute has arranged for a regular course of training for officers of the Statistical departments of the State and

Central Governments. The aim of this course is to make the officers who had already some experience in statistical organisations better equipped to undertake the responsibilities in their departments.

For admission to the course a person must (1) belong to the staff of the statistics section of a department in the Central or State government and should have not less than two years' experience in statistical work, and (2) have a good university degree. These conditions can be relaxed if the candidate is otherwise qualified by virtue of his experience, research work, etc.

Applications for admission should be made in the prescribed form and addressed to the Central Statistical Organisation, through the Head of the Statistics department or in the absence of such a department, through the Secretary to Government in the department dealing with Statistics. The sponsoring authority, while recommending the application, should state whether specialised training is desired in any particular field in which case the period of deputation should be nine months, otherwise six months.

Special Short Duration Individual Training for Officers on Deputation :

An officer on deputation from a Government department, University or recognised scientific or technical institution can be admitted for short duration any time during the year on the following conditions :—

The application (in prescribed form) must be forwarded by the deputing authority. The candidate should have a special problem arising out of current work requiring guidance from the Institute, or should be seeking to specialise in a specific branch of statistics likely to be useful later on in work. (Officers needing a general education in statistics should look for alternative courses).

Computer's Training Courses :

The object of these courses is to train students for the posts of computers and junior statisticians. The syllabus is the same as that of the Computer's Certificate Examination ; Parts 1-A, 1-B and 1-C of the Indian Statistical Institute. Candidates appearing at this examination will find the courses useful. The two courses Junior and Senior, are each of six months, and commence once in January and again in July. Students can attend either the morning session or the evening session. The Junior course corresponds to Parts 1-A and 1-B and the Senior to Part 1-C of the above examination.

Candidates who have passed the Intermediate Examination or with experience in computation in a statistical office are eligible for admission. Selection for admission will be made on the basis of written and/or oral tests on general ability and elementary mathematics.

Occasional Courses on Special Subjects :

In addition to the above courses, special courses in different branches of statistics are arranged occasionally. Such courses are ordinarily arranged only on special requests, or when the services of a distinguished scientist become available at the Institute, or when there is evidence that a sufficient number of qualified students for a course would be forthcoming. In the past, courses of this type have been conducted on subjects like Design of Experiments, Statistical Quality Control, Time Series, Econometrics, Prediction problems, Statistical Inference, Operational research, etc., with duration varying from two weeks to six months.

General Note :

Certificates will be awarded only to candidates who satisfactorily complete the training courses and pass prescribed examinations. Application, in prescribed form for admission to any of the above courses, should be sent to the Registrar, Indian Statistical Institute, 203, Barrackpore Trunk Road, Calcutta-35. To the extent possible, the announcement of the courses will be made at least two weeks in advance of the last date for application for each course, through advertisements in important newspapers in India, or by circulation through government departments, recognised institutions, etc., as required. Acknowledgement of receipt of application, intimation when not selected for admission, etc., will be made *only* if self-addressed stamped envelopes are enclosed with the application.

OFFICE BEARERS AND ADMINISTRATION

<i>President :</i>	Sri C. D. Deshmukh.
<i>Chairman :</i>	Sri D. N. Mitra.
<i>Vice-Presidents :</i>	Dr. Zakir Hussain, Ph.D. Dr. P. N. Banerjee, D.Sc. Prof. D. R. Gadgil, M.A., M.Litt. Prof. S. N. Bose, M.Sc., F.N.I. Sir Shri Ram. Prof. D. G. Karve, M.A.
<i>Vice-Chairmen :</i>	Dr. S. K. Banerjee, D.Sc. Sri K. P. Goenka. Sri S. C. Ray, M.A., B.L. Prof. N. R. Sen, M.A., D.Sc.
<i>Treasurer :</i>	Dr. S. C. Law, Ph.D., F.N.I.
<i>Secretary :</i>	Prof. P. C. Mahalanobis, F.R.S.

Joint Secretaries :

Sri N. C. Chakravarti, M.A.

Sri S. C. Sen (Cantab).

Sri P. Pant, M.Sc.

Branch Secretaries :

Sri V. M. Dandekar, M.A.

Poona branch :

Dr. G. R. Seth.

Delhi branch :

Dr. D. V. Rajalakshman.

Madras branch :

Sri M. A. Telang, M.A.

Bombay branch :

Sri A. Salim, M.A.

Aligarh branch :

Prof. Srinagabhushana.

Mysore State branch :

NATIONAL CHEMICAL LABORATORY, POONA

The National Chemical Laboratory is located in a site of about 500 acres including a residential colony, about 5 miles from the Poona Railway Station on the road leading from the University to the National Defence Academy. The Laboratory, the purpose of which is "to advance knowledge and to apply chemical science for the good of the people", was formally opened by the Prime Minister on the 3rd January, 1950. The foundation-stone was laid by the late Sri B. G. Kher, Chief Minister of the Bombay Government, on the 6th April, 1947.

The Laboratory consists of seven Divisions: (1) Biochemistry, (2) Chemical Engineering, (3) Inorganic Chemistry, (4) Organic Chemistry, (5) Physical Chemistry, (6) Plastics and Polymers, and (7) Survey and Information. The Organic Chemistry Division includes an Essential Oils Section. A Radioactive Tracer Laboratory and an Instrumentation Section form parts of the Physical Chemistry Division. Investigations of industrial interest are carried to the pilot-plant scale in the Chemical Engineering Division. The workshop is fully equipped for assisting the work of the Divisions by maintaining the plant and equipment, and also has facilities for fabricating instruments, apparatus and equipment. The Library subscribes for over 500 journals and has a comprehensive collection of books on chemistry, chemical technology and other allied subjects.

NATIONAL METALLURGICAL LABORATORY,

JAMSHEDPUR-7

Just over seven years ago, the National Metallurgical Laboratory came into existence. During these years, considerable pioneering research and development work has been undertaken in the fields of mineral and metal industries which form the backbone of the Second Five Year Plan. The Second Five Year Plan deals basically with the setting up of heavy and engineering industries. In order to do so, systematic assessment of mineral resources, utilisation of raw materials and development of substitute alloys, to cut down imports of important alloys which we lack, has been done. The National Metallurgical Laboratory has been playing an exceedingly useful role in fulfilling these objectives. Its activities have ranged far and wide, educative in one direction like holding symposia annually, on subjects of topical importance, to short and long term research and pilot plant investigations on mineral beneficiation, development of substitute alloys utilising alloying elements readily available to the exclusion of those that are scarce in our country. These investigations are then translated into pilot plant projects and currently heavy pilot plants are in the process of being set up relating to mineral and thermal beneficiation of ores, refractories and aluminising of steel.

ORGANISATIONAL SET-UP

The research and other activities of the Laboratory are conducted in seven main divisions under the guidance of Dr. B. R. Nijhawan, Ph.D., F.I.M., F.N.I., Director of the Laboratory. Major industrial problems are entrusted to a group of research workers drawn from different divisions. In formulating the research programme and framing the budget of the Laboratory, the Director has the advice of the Executive Council under the able Chairmanship of Sir J. J. Ghandy, Director-in-Charge, Tata Industries Ltd.

The various Research and other Divisions are enumerated below :—

- (a) General Metallurgy Division.
- (b) Chemical Division.
- (c) Ore-Dressing and Mineral Beneficiation Division.
- (d) Physical Metallurgy Division.
- (e) Extractive Metallurgy Division.
- (f) Refractories Division.
- (g) Mechanical Metallurgy & Testing Division.
- (h) Low-Shaft Furnace Project.
- (i) The Liaison and Information Division.

RESEARCH PROGRAMME AND PROGRESS ACHIEVED

The Research and Development Programme of the National Metallurgical Laboratory is based in relation to the requirements of the Five Year Plans and is wholly related to approaches of an applied character on problems calculated to be of industrial potential to the country. Certain problems of fundamental scientific value are being continued to be investigated especially those that have often elicited commendable comments from top authorities in other parts of the world engaged on attacking identical problems.

A brief review of the outstanding achievements of this laboratory are enumerated below:—

NICKEL FREE STAINLESS STEEL

After a systematic and painstaking investigation this laboratory has been successful in producing nickel-free austenitic stainless steel entirely from indigenous resources possessing properties comparable to 18/8 stainless steel.

These stainless steels can be widely used for all kinds of utensils in Indian household, including tumblers, thalis, katories, spoons, pots, pressure cookers, cooking ranges, etc. It is understood that the demand for imports of nickel-bearing stainless steels has currently been at the rate of 6/7,000 tons at a cost of about Rs. 7 crores per annum. The above nickel-free substitute steels can replace the nickel-bearing (containing 8-10% nickel) stainless steels with considerable savings in foreign exchange. These substitute steels will also be very useful for hospitalware, dairy equipment, decorative and architectural parts, for stainless steel furniture, high strength structural members, automotive wagons, liquid fertiliser tanks, tank trailers, wash basins, stainless steel India-type lavatory pans used in Indian railways, and for similar other railway fittings on the Indian railway coaches.

ELECTROLYTIC MANGANESE AND MANGANESE DIOXIDE

Production of electrolytic manganese of 99.9% purity from low-grade manganese ore is another significant contribution the laboratory has made for the metal industry.

Electrolytic manganese can be used for the production of 12% manganese Hadfield Steel, for railway points and crossings, chromium-manganese austenitic stainless steel, 1-2.5% manganese containing Al-Mn sheets with high resistance to corrosion and with excellent mechanical properties, high expansion alloy containing 70% manganese for use as bi-metallic elements in temperature control devices, low expansion alloy with 5 % Mn for watch springs and precision instruments, substitute brass containing 1 % Mn to be used as a suitable substitute for cartridge brass and alloys for coinage.

Electrolytic manganese from very low grade manganese ore is now under continuous production in the laboratory at the rate of 32 lbs. of metal per day. Schemes for the production on 3 tons and 10 tons per day basis have also been drawn up.

High purity manganese dioxide suitable for battery manufacture has been successfully produced by the development of a suitable process by utilising low-grade manganese ores. Manganese dioxide has wide industrial applications such as for decolourising of glass, production of coloured ceramic articles and in chemical preparations, but its most important use is as de-polariser in dry batteries.

India has got vast reserves of manganese ores and low grade ores are inexhaustible. By employing this process, even low grade manganese ores which at present find no market can be utilised to produce electrolytic manganese dioxide of 99.9% purity at a comparatively cheaper price and this can effect a sizeable reduction in the import with immediate effect and in the long run, India can become an exporter of manganese dioxide for overseas countries.

UP-GRADING LOW-GRADE MANGANESE ORES

Valuable work has been done on beneficiation of low-grade manganese ores on all-India basis, particularly on the amenability of low-grade ores to various beneficiation methods.

Considerable ore-dressing work has been done in this laboratory on a large quantity of low-grade ores from various parts of the country and processes have been evolved whereby the manganese content has been mostly improved to 48% and above thus making them suitable for ferro-manganese manufacture. A monograph, embodying the results of this extensive work carried out by the laboratory giving full statistical data on the production and export of manganese ores in India, is now under publication.

Besides, beneficiation work on chromite ores of Mysore, Orissa and Bihar, graphite from indigenous origin; wolfram from Rajasthan, cassterite from Bihar, pyrite and sulphur from Mysore, Bombay and Bihar; vermiculite from Mysore and West Bengal; kyanite from Mysore and gypsum from Rajasthan, are amongst the multitude of beneficiation work done on the low-grade ores of the country.

Although India is rich in iron ore deposits, iron ore fines are unsuitable for charging in blast furnace for smelting operation. Highly successful sintering experiments have been conducted with such type of ore from Bhilai site and the material has been made suitable for charging in the furnace readily. This work is of immediate industrial applicability.

DEVELOPMENT WORK IN REFRACTORIES

A number of refractory minerals like sillimanite, magnesite, bauxite, etc., were investigated for the production of suitable refractory materials which can be profitably used for metallurgical plants in this country. The chief features of the development work carried out by this laboratory consist in the fact that such refractories could be produced from indigenous sources especially those that find no use at present. As for example, forsterite refractories, carbon refractories, super-duty insulation refractories, etc., have been successfully developed utilising raw materials found in abundance in the country.

CARBON AND CLAY BONDED GRAPHITE CRUCIBLES

These crucibles are used for melting metals and can be used both in ferrous and non-ferrous foundries. They are also ideal for use with highly corrosive slag as neither the slag nor the metals can wet them. At present a large proportion of the country's requirement is being met with by imports which on an average amounts to about 700 tons costing more than a million rupees.

Work has been in progress in the National Metallurgical Laboratory on both clay bonded as well as carbon bonded graphite crucibles and processes for the manufacture have now been successfully worked out and crucibles of commercial size have been made. Test reports coming about the actual service performance of these crucibles show that they are very much more economical and possess far longer life than the imported graphite crucibles now used in this country.

FOUNDRY MOULDING SAND

To meet the needs of the fast-progressing foundry, a long term project was initiated on the assessment of moulding characteristics of various Indian foundry sands and bonding materials for their suitability in iron, steel and non-ferrous foundries. The data valuable for standardising their sand plant practice, have been made available to foundries and have been well received by them.

ALUMINISING OF STEEL

Aluminising of steel by hot-dip method utilising halide, organic and aqueous fluxes has successfully been developed on a laboratory scale. Aluminised articles can be used under corrosive atmosphere and can find variety of uses in various industrial applications such as in telegraphic wires and poles and related fields. The superiority of aluminised steel over the galvanised ones is well known. India is meeting her requirements of zinc chiefly by imports whereas aluminium ores are abundant in India. The utilisation of this process for aluminising can thus conserve the country's demand for zinc.

PLATING

New plating techniques for plating metals on non-metals, brass plating on non-cyanide baths and plating on aluminium have been developed and considerable interest has been shown by the industries in India to exploit these processes.

LIQUID GOLD

Encouraging results have been obtained in the production of liquid gold using various additions agents, the product compare favourably with the imported variety. Foreign exchange to the extent of about Rs. 75 lakhs to Rs. 1 crore can be conserved once this research development is put into industrial practice.

PRODUCTION OF STEEL BY "L. D. PROCESS"

Designed and fabricated in the National Metallurgical Laboratory, this is the first of its kind to be installed on a Pilot Plant scale in India. The L. D. process of steel making is widely employed in the continent and the chief advantages for employing this process in this country lie in the fact that the Indian pig iron which has a medium phosphorous content, too low for a basic bessemer practice and too high for acid bessemer practice for production of refined steel, can be successfully processed in one stage, as oxygen lancing under high pressure eliminates carbon and phosphorus simultaneously. Besides, steel produced by this process is low in nitrogen and greater output in minimum time is facilitated.

The L. D. Converter installed in this laboratory is basic lined and has been designed to treat upto 0.1 ton of molten metal per blow. Practical trials with this converter have been successful and have yielded useful data which can be profitably utilised in India's steel expansion programme.

PILOT PLANT PROJECTS

Highly encouraging results have been obtained on some of the industrial processes initiated on a laboratory scale at the National Metallurgical Laboratory which are now being translated into pilot plant scale before releasing them for commercial exploitation. The outcome of these projects will result in sizeable saving of foreign exchange and some of them may earn foreign currency in future.

The following is the list of the various pilot plant projects under way in the laboratory :-

- (1) Production of electrolytic manganese.
- (2) Production of electrolytic manganese dioxide.
- (3) Concentration of manganese ore high in iron.
- (4) Chemical polishing of aluminium.

- (5) Hot-dip aluminising of steel wire and steel sheet.
- (6) Thermal beneficiation of low-grade manganese and chromite ores.
- (7) Treatment of low-grade manganese, chromium and other indigenous ores by ore dressing methods
- (8) Pilot plant production of refractories
- (9) Production of iron in pilot low-shaft furnace.

TECHNICAL AID TO INDUSTRY

In addition to the essential programme of fundamental and applied research work, the National Metallurgical Laboratory strives to aid the growth and development of Indian metallurgical industries by undertaking *ad hoc* investigations and providing the industry with necessary information and technical know-how, etc. A number of industries like iron and steel works, mining and metallurgical industries, rolling mills, foundries, engineering works, non-ferrous industries, galvanising plants, electroplating concerns, etc., including Govt. Departments like Ministry of Railways, Ministry of Commerce and Industry, etc., have availed such technical assistance from this laboratory.

SYMPOSIA

Symposia on different metallurgical and allied subjects are held regularly for the purpose of disseminating to industries the results of the laboratory's investigations and putting forth the latest technical 'know-how' particularly to the Indian metallurgical industries. The symposia so far held covered a variety of subjects as detailed below and were attended by distinguished scientists and eminent men in the field from the overseas countries.

- (1) Electroplating and Metal Finishing.
 - (2) Industrial Failure of Engineering Metals and Alloys.
 - (3) Non-ferrous Metal Industry in India.
 - (4) Recent Trends in the Field of Production, Practice and Research on Refractories used in Metal Industries.
 - (5) Production, Properties and Applications of Alloys and Special Steels.
 - (6) Mineral Beneficiation and Extractive Metallurgical Techniques.
- Arrangements are now in hand for a Symposium on "Recent Developments in Foundry Technology" to be held in early February, 1958.

A list of the officers of the Laboratory is given below:—

DIRECTOR

Dr. B. R. Nijhawan, Ph.D., F.I.M., F.N.I.

DY. DIRECTOR

Dr. T. Banerjee, D.Sc., Ph.D., F.R.I.C., F.I.M., F.N.I.

ADMINISTRATIVE OFFICER

Naseeruddin Ahmed.

DIVISIONAL HEADS AND OFFICERS OF RESEARCH
AND OTHER DIVISIONS*Assistant Director (Ore-Dressing) :*

Sri P. I. A. Narayanan, B.Sc. (Met.), A.M.I.M.M.

Assistant Director (Physical Metallurgy) :

Dr. E. G. Ramachandran, M.Sc., Ph.D. (Met.).

Officer-in-Charge, Low Shaft Furnace Project :

Dr. A. B. Chatterjea, M.Sc., B.Met., A.I.M. (London), D.Phil. (Sc.), A.M.I.E. (Ind.), M.I.I.M.

Assistant Director (Ext. Met.) :

Sri P. P. Bhatnagar, M.Sc., B.Met.

Senior Scientific Officer, Grade I (Ref.) :

Sri H. V. Bhaskar Rao, B.Sc. (Ind. Chem.), M.Sc. (Ceramic Engg.).

*Senior Scientific Officer, Grade I-in-Charge,**(Liaison and Information Division) :*

Sri R. M. Krishnan, B.Sc., B.Sc. (Met.), Dip. N.F.C. (London), M.I.I.F.

Senior Scientific Officer, Grade I (Low Shaft Furnace Project) :

Sri B. L. Sen, M.Sc.

Senior Scientific Officer, Grade I(G. Met.) :

Sri S. S. Bhatnagar, B.Sc. (Met.).

Senior Scientific Officer-in-Charge (Chem. Division) :

Dr. B. C. Kar, D.Sc. (Dacca), A.I.M. (London).

Senior Scientific Officer-in-Charge (G. Met. Division) :

Sri P. K. Gupte, B.Sc. (Met.).

Senior Scientific Officer, Grade II (Ore-Dressing) :

Sri G. V. S. Iyer, M.Sc.

Senior Scientific Officer, Grade II (M. M. & T.) :

Sri B. N. Das, M.Sc.

Senior Scientific Officer, Grade II (Phy. Met.) :

Sri A. N. Kapoor, M.Sc., A.I.M. (London).

Senior Scientific Officer, Grade II (Chem.) :

Sri H. K. Chakraborti, M.Sc.

Senior Scientific Officer, Grade II (Refractories) :

Sri H. P. S. Murthi, B.Sc.

Senior Scientific Officer, Grade II (L. & I. Division) :

Sri K. N. Srivastava, B.Sc. (Met.), A.I.M.

Senior Scientific Officer, Grade II (Phy. Met.) :

Sri L. J. Balasundaram, B.Sc., D.I.I.Sc., M.Met.

Senior Scientific Officer, Grade II (Ext. Met.) :

Sri M. C. Sen, B.Sc. (Met.).

Senior Scientific Officer, Grade II (Ore-Dressing) :

Sri G. P. Mathur, B.Sc. (Met.).

Senior Scientific Officer, Grade II (Refractories) :

Sri M. R. K. Rao, M.Sc.

Junior Scientific Officer (Chem.) :

Sri D. S. Tandon, M.Sc.

Junior Scientific Officer (Chem.) :

Dr. H. P. Bhattacharya, M.Sc., D.Phil. (Sc.).

Junior Scientific Officer (Phy. Met.) :

Sri Ved Prakash, M.Sc.

Junior Scientific Officer (G. Met.) :

Sri S. Ranganathan, B.Sc. (Met.).

Junior Scientific Officer (Chem.) :

Sri P. B. Chakraborti, M.Sc.

Junior Scientific Officer (Chem.) :

Sri N. G. Banerjee, M.Sc.

Junior Scientific Officer (Refractories) :

Sri T. V. Prasad, M.Sc.

Junior Scientific Officer (Phy. Met.) :

Sri K. D. Maji, M.Sc.

Junior Scientific Officer (L. & I.) :

Sri P. K. Gupta, B.Sc., B.Met.

Junior Scientific Officer, (G. Met.) :

Sri Jatinder Mohan, B.Sc., D.I.I.Sc.

Junior Scientific Officer (Ext. Met.) :

Sri R. A. Sharma, M.Sc.

Junior Scientific Officer (Chem.) :

Sri A. K. Lahiri, B.Sc. (Met. Engg.).

Junior Scientific Officer (Refractories) :

Sri Ravindra Singh, B.Sc.

Junior Scientific Officer (Ext. Met.) :

Sri V. S. Sampath, B.Sc.

Junior Scientific Officer, (G. Met.) :

Sri R. D. Gupta, M.Sc.

Junior Scientific Officer (M. M. & T.) :

Sri R. Choubey, B.Sc.

Junior Scientific Officer (Ore-Dressing) :

Sri M. S. Chopra, M.Sc.

Junior Scientific Officer, (G. Met.) :

Sri N. S. Ramamurthi, B.Sc., D.I.I.Sc.

Electronic Engineer :

Sri A. P. Choudhury, M.Sc., D.I.I.Sc.

Design Engineer :

Sri M. J. Shahani, B.Sc , B.Ch.E.M.

Mechanical Engineer :

Sri R. C. Verma, B Sc , B.F.

Electrical Engineer :

Sri Howaldar Singh, B Sc.Engg. (Elect.).

SERAMPORE COLLEGE, SERAMPORE, WEST BENGAL

Serampore College, standing in a large compound on the banks of the river Hooghly opposite Barrackpore Park, was the first institution in India to receive the rights and privileges of a University. Founded in 1818 by William Carey, Johsua Marshman and William Ward, "for the instruction of Asiatic Christian and other youth in Eastern Literature and European Science", it was in 1827 incorporated by Royal Charter granted by His Majesty, King Frederick VI of Denmark, the town of Serampore being at that time a Danish Settlement, and in 1845 it was confirmed by the British Government in its chartered rights and immunities on the transfer by the Treaty of Purchase of the Settlement of Serampore from Denmark to Great Britain. In 1856 the College was entrusted to the Baptist Missionary Society to become part of the Society's educational activities; and the following year it was decided to affiliate the College to the newly-formed University of Calcutta, and for 25 years students of the College were sent up for the Calcutta University examinations. For another 25 years the University classes were suspended, but in 1910 the College was re-organised under its own Council on the lines laid down by the Founders, by the appointment of a qualified staff in the Faculty of Theology under the provisions of the College Charter, by the opening of Theological classes on an inter-denominational basis, and by the renewal of affiliation to the University of Calcutta in the Faculties of Arts and Science. In 1915 the College Charter was utilized for the first time for the conferring of Serampore Degrees in Divinity, and in 1918 the Serampore College Act was passed by the Bengal Legislative Council, by which the College Council was enlarged and a Senate was constituted on an inter-denominational basis. The College is now affiliated to the University of Calcutta in the Faculties of Arts and Science, while in the Faculty of Theology it exercises its rights and functions as an University and confers its own diplomas and degrees, namely the Diploma of Licentiate of Theology, and the Degrees of Bachelor of Divinity, Master of Theology, and Doctor of Divinity.

The final authority in all matters relating to the College is the *Council of Serampore College*, a representative body consisting at present of fourteen members resident in India having its headquarters in Serampore. The President of the Council is the Master of the College, Mr. P. Mahanty, M.A.

The Secretary of the Council is the Rev. E. G. T. Madge, B.A., B.D.

For the internal management and good government of the College as a teaching institution, authority is delegated by the Council to the *Faculty of the College*, consisting of the Principal of the College and other members appointed by the Council. At present the following, Principal and Professors who are all in residence, form the Faculty :—

- Rev. C. E. Abraham, M.A., D.D. (Principal).
- Sri M. N. Biswas, M.A. (Vice-Principal).
- Rev. W. Stewart, M.A., B.D. (Registrar).
- Sri K. R. Chatterji, M.A., B.L. (Secretary, Arts-Science Dept.).
- Rev. B. F. Price, M.A., B.D. (Secretary, Theology Dept.).
- Rev. E. L. Wenger, M.A., B.D.
- Sri S. N. Roy, M.A.
- Rev. D. F. Hudson, M.A. (Bursar).

THE ARTS-SCIENCE DEPARTMENT

The College, as an institution teaching in Arts and Science, is affiliated to the University of Calcutta in the following branches :—

- I.A.—English, Bengali, History, Logic, Civics, Sanskrit, Hebrew, Syriac, Mathematics, Chemistry, Physics, Commercial Geography and Commercial Arithmetic & Book-keeping.
- B.A.—English (Pass and Hons.), Bengali, Philosophy (Pass and Hons.), Sanskrit (Pass and Hons.), History, Economics, Mathematics (Pass and Hons.), Hebrew, and Syriac.
- I.Sc.—English, Bengali, Mathematics, Physics, Chemistry, and Biology.
- B.Sc.—Chemistry, Physics (Hons.), and Mathematics (Hons.).

THE THEOLOGICAL DEPARTMENT

The College, as an institution teaching in the Faculty of Theology, follows the Serampore Courses in the following :—

- L.Th. Diploma Course.
- B.D. Degree Course (including the Preliminary Course to the B.D.).
- M.Th. Degree Course.

HOSTELS, LIBRARY AND COLLEGE SESSIONS

Attached to the College is a well-equipped Hostel for men students under the care of wardens who are members of the teaching staff of the College.

The Library of the College, containing about 20,000 volumes, provides not only for the needs of the main body of students, but also offers facilities for research work, especially in subjects connected with the study of Theology. The older section of the Library contains many rare and valuable volumes.

The College Sessions for the Arts-Science Department and the Theological Department are approximately—

First Term—July 1 to September 21.

Second Term—November 1 to December 28.

Third Term—January 2 to the end of April (or the close of examinations).

Further particulars regarding courses of study, qualifications for entrance, scholarships, etc., may be obtained from the Principal, Serampore College, Serampore, E. I. Ry., W. Bengal.

SERAMPORE COLLEGE AS A UNIVERSITY

Serampore College in its capacity as a University incorporated by Royal Charter exercises its University functions in the Faculty of Theology. For the framing of courses of studies in Theology, the holding of examinations, the forming and administration of Regulations relating thereto, and the making of recommendations to the Council regarding the granting of Degrees and Diplomas in Theology, authority is delegated to the *Senate of Serampore College*, resident in India, and at present consisting of the following :—

Convener and President :

Rev. C. E. Abraham, M.A., D.D.

Registrar :

Rev. William Stewart, M.A., B.D. (on furlough).

Rev. A. E. D. Frederick, M.A., B.D. (Offg. Registrar).

Rev. J. R. Chandran, M.A., B.D., S.T.M.

Rev. S. C. De, B.A., B.T., L.Th.

Rev. C. Devasahayam, B.Sc., B.D.

Rev. D. J. Duffy, M.A., B.D., Ph.D.

Rev. W. G. Griffiths, Ph.D.

Rev. M. H. Harper, B.Sc., B.D., Ph.D.

Rev. D. F. Hudson, M.A.

Rev. F. J. Kline, M.A., B.D., Ph.D.

Rev. Canon P. de D. May, M.A.

Rev. C. C. Pande, B.A.

Rev. J. Reid Graham, Ph.D.

Rev. T. Rodborne, B.A., B.D.

Rt. Rev. J. W. Sadiq, M.A., B.D. (Hons.).

Rev. W. Scopes, M.A.

Rev. Canon T. Sitther, M.A., D.D.

Rev. J. J. P. Tiga, M.A., B.D., M.S.T.

Rev. T. C. Thomas, M.A., L.T., B.D.

AFFILIATED COLLEGES

The following Colleges in India are affiliated to Serampore College in the Faculty of Theology :—

<i>Name of College.</i>	<i>Principal.</i>
United Theological College, Bangalore.	Rev. J. R. Chandran, M.A., B.D., B.Litt., S.T.M.
Leonard Theological College, Jabalpur.	Rev. M. H. Harper, B.Sc., B.D., Ph.D.
Bishop's College, Calcutta.	Rev. P. de D. May, M.A.
Gurukul Lutheran Theological College & Reserach Institute, Madras.	Rev. P. David, M.A., B.D., Ph.D.
Mar Thoma Theological Seminary, Kottayam.	Rev. T. C. Thomas, M.A., L.T., B.D.
Kerala United Theological Seminary, Trivandrum.	Rev. M. V. George, M.A., B.D., S.T.M.
Theological College, Cherrapunji.	Rev. T. B. Phillips, B.A., B.D.
United Theological College of Western India, Poona.	Rev. J. Reid Graham, B.A., B.D., Ph.D.
Baptist Theological College, Kakinada.	Rev. A. B. Masilamani, M.A., M.Th.
Andhra Union Theological College, Dornakal.	Rev. G. S. C. Azariah, B.A.
Basel Evangelical Mission Theological Seminary, Mangalore.	Rev. S. J. Samartha, B.A., B.D., S.T.M.
Gujarat United School of Theology, Ahmedabad.	Rev. R. B. Desai, B.A., B.D., S.T.M.
Luthergiri Theological College, Rajahmundry.	Rev. M. H. Schramm, D.D. (Offg.)
Lutheran Theological College, Ranchi.	Rev. Joel Lakra, M.A., B.D., S.T.M.
Tamilnad Theological College, Tirumaraiyur, Tirunelveli.	Rev. Canon T. Sittther, M.A., B.D., D.D.
Union Kanarese Seminary, Tumkur.	Rev. C. B. Firth, M.A.
North India United Theological College, Saharanpur.	Very Rev. S. N. Talib-Uddin, D.D.
Union Theological College, Bareilly.	Rev. D. S. Choudhry, M.A., B.D., S.T.M.
Union Theological Seminary, Indore.	Rev. D. Pathia, B.A., B.D.

Admission to the University.

A candidate seeking admission to the University must have passed the Matriculation examination conducted by Serampore College or an examination accepted as equivalent thereto.

The Matriculation examination is held annually normally in February, and candidates must take the following *compulsory papers* :—

English, Scripture, Current Affairs, Arithmetic and Geography,
Modern Indian Language.

Candidates must also take one of the following *optional papers* :—

Elementary Science, Algebra and Geometry, Civics, History, Classical Latin, N. T. Greek.

Matriculates may enter upon the courses leading to the L.Th. Diploma; candidates seeking admission to the B.D. Degree Course must either have graduated in Arts or Science, or have passed with "Distinction" the examination of the Preliminary Course to the B.D. Degree.

COURSES OF STUDY, DIPLOMAS AND DEGREES

Licentiate of Theology (L.Th.) Diploma Course.

Open to Internal Students only.

Twenty-nine papers must be completed from the following :—

First year (nine papers) :

<i>Compulsory (eight)</i>	<i>Optional (one)</i>
Old Testament (2 papers)	New Testament Greek
New Testament (3 papers)	Psychology
English Composition	Background History to the N. T.
Vernacular Composition	Elements of Science
History of Christianity in India	

Second and Third Years (twenty papers) :

<i>Compulsory (sixteen)</i>	<i>Optional (four)</i>
Old Testament (4 papers)	Church History
New Testament (4 papers)	History of Religions
Christian Theology (2 papers)	Vernacular Studies
Church History	Pastoralia
History of Religions	Rural Reconstruction
Essays (3 papers)	New Testament Greek
Pastoralia (a)	Religious Education
	Liturgiology
	Christian Public Worship

Bachelor of Divinity (B.D.) Degree Course.

Open to Internal and External Students.

(a) *Preliminary Course* (One Year) for non-graduates.

The Preliminary Course comprises the following subjects, of which five are compulsory and two optional :—

<i>Optional</i>	<i>Compulsory</i>
Psychology	Old Testament
N. T. Greek	New Testament
Classical Language	English Literature
History and Elements of Science	Modern Indian Language

The candidates must pass the examination with “Distinction” to qualify for registration in the B.D. Course.

(b) *B.D. Course* (Three-Year Course) for graduates and those who have qualified with “Distinction” in the Preliminary Course.

Twenty-three papers must be completed from the following Branches :—

- Branch I—Old Testament, with or without Hebrew.
- Branch II—New Testament, with Greek.
- Branch III—Christian Theology.
- Branch IV—Church History.
- Branch V—History of Religions.
- Branch VI—Philosophy and Psychology.
- Branch VII—Christian Ethics and Social Thought.
- Branch VIII—Languages.
- Branch IX—Pastoralia.
- Branch X—Liturgiology.
- Branch XI—Religious Education.
- Branch XII—Rural Church and Indian Culture.
- Branch XIII—Essays.

Fifteen Compulsory Papers must be taken from Branches I to V and IX; Eight Optional Papers must be chosen from among all the Branches. In addition, internal students are required to write seven essays and external students to take two Essay Papers in Branch XIII.

Master of Theology (M.Th.) Degree Course.

Open to Internal and External Students.

One Branch must be completed selected from the following Branches :—

- Branch I—Old Testament, with Hebrew.
- Branch II—New Testament, with Hellenistic Greek.
- Branch III—Christian Theology.
- Branch IV—History of Religions.
- Branch V—Church History.
- Branch VI—Philosophy of Religion.

The examination in each Branch consists of seven papers, six compulsory and one selected from a number of optionals, or a Thesis may be offered in lieu of the Optional paper.

Candidates who have obtained the B.D. Degree (in the First or Second Class) are eligible for registration.

Doctor of Divinity (D.D.) Degree.

The Doctorate may be obtained on submission of a Thesis in accordance with the Regulations. Normally a candidate must have obtained the M.Th. Degree or the equivalent.

Diploma in Religious Knowledge (One Year Course).

Outline Syllabus of Studies :

- | | |
|---|---------------|
| 1. General Knowledge of the Bible. | 3 hour paper. |
| 2. History of the Hebrew people (B.D. Course) | 3 „ „ |
| 3. Life and teaching of Jesus (P.D. Course) | 3 „ „ |
| 4. Life and Letters of St. Paul (L.Th. Course) | 3 „ „ |
| 5. General Outline of Church History from the beginning to the present time (B.D. Course) | 3 „ „ |
| 6. Outline of Christian Theology. | 3 „ „ |

The Examinations for the L.Th. Diploma and the B.D. Degree, are normally held in April of each year; those for the M.Th. degree, normally in November.

The Regulations regarding the syllabuses and courses of study, and information concerning qualifications for entrance, prescribed books and texts, etc., may be obtained from the Registrar, Serampore College, Serampore, W. Bengal.

THE TATA INSTITUTE OF FUNDAMENTAL RESEARCH

NAME AND ADDRESS

Tata Institute of Fundamental Research, Apollo Pier Road, Bombay-1.

BRIEF HISTORY DESCRIBING THE DEVELOPMENTS OF THE INSTITUTE

The Institute was founded in June 1945 by the Trustees of the Sir Dorabji Tata Trust in co-operation with the Government of Bombay, to carry on fundamental research in physics, mathematics and allied sciences. In 1948, the Government of India entered the picture and, in view of its increasing contributions, the Institute's constitution was amended in 1956 to give the Government of India appropriate representation on the Council. At the same time, the Government of India recognised the Institute as the national centre for advanced study and fundamental research in nuclear science and mathematics.

Prior to the formation of the Atomic Energy Establishment, Trombay, the Atomic Energy Commission entrusted to the Institute all its large-scale nuclear research projects. Pending the construction of the laboratories at Trombay, the Institute continues to provide facilities to the Divisions of the Engineering and Physics Groups of the Trombay Establishment.

SCOPE

The object of this all-India Institute is fundamental research in physics, mathematics, and allied sciences. The Institute is permanently recognised by the University of Bombay as a constituent recognised institution for post-graduate research in physics and mathematics.

The procedure for joining the Institute is by applying when vacancies are advertised, usually in the month of May or June. Applications are, however, entertained at other times of the year also if and when vacancies occur.

The minimum qualification required is a First or Second Class Master's degree or a First Class Honours degree in physics or mathematics. If the qualifications meet the Institute's requirements, the candidate will be appointed to a suitable post subject to a successful internment and a satisfactory medical examination by the Institute's Medical Officer. A member of the academic staff can register himself at certain

universities for post-graduate degree by research, subject to the person to whom he is attached being recognised by that university as a Teacher for that degree.

There is a hostel attached to the Institute with a limited accommodation and the allotment of rooms is made strictly according to the seniority of the applicants.

The Institute provides facilities for research in the following subjects :

I (a) *Theoretical Physics* :

Theory of elementary particles, cosmic rays and nuclear physics.

(b) *Experimental Physics* :

- (i) Cosmic ray studies by means of nuclear emulsions.
- (ii) Cosmic ray studies by means of cloud chambers.
- (iii) Geophysics.
- (iv) High altitude measurements of cosmic rays.
- (v) Nuclear magnetic resonance and nuclear magnetic moments.
- (vi) Neutron physics.
- (vii) Beta-ray spectroscopy and radio-activity studies
- (viii) Instrumentation.

II. *Mathematics* :

Pure and applied mathematics, including statistics.

COUNCIL OF MANAGEMENT

Mr. J. R. D. Tata. (*Chairman*)

Dr. H. J. Bhabha, D.Sc., F.N.I., F.R.S.

Mr. S. Ratnam.

Mr. V. T. Dehejia, I.C.S.

Professor R. Choksi, M.A

LIST OF SCIENTIFIC STAFF AND OFFICE BEARERS

Scientific Staff :

Dr. H. J. Bhabha, D.Sc., F.N.I., F.R.S.—Director & Professor of Theoretical Physics.

Professor K. Chandrasekharan, Ph.D.—Professor of Mathematics.

Professor D. D. Kosambi, B.S. (Harvard)—Professor of Mathematics.

Professor B. Peters, Ph.D.—Professor of Experimental Physics.

Dr. D. Y. Phadke, Ph.D.—Associate Professor of Experimental Physics.

Dr. S. S. Dharmatti, Ph.D.—Reader in Experimental Physics.

Dr. M. G. K. Menon, Ph.D.—Reader in Experimental Physics.

- Dr. K. G. Ramanathan, Ph.D.—Reader in Mathematics.
- Dr. B. V. Thosar, Ph.D.—Reader in Experimental Physics.
- Dr. S. K. Bhattacharjee, Ph.D.—Fellow in Experimental Physics.
- Dr. S. Biswas, Ph.D. — do —
- Dr. R. R. Daniel, Ph.D. — do —
- Dr. S. Jha, Ph.D. — do —
- Dr. E. Kondaiah, Fil. Lic., Fil. Dr. — do —
- Mr. D. Lal, M.Sc. — do —
- Dr. R. Narasimhan, Ph.D. — do —
- Dr. B. V. Sreekantan, Ph.D. — do —
- Dr. P. Ammiraju, Ph.D.—Research Fellow in Experimental Physics.
- Mr. V. K. Balasubramanian, M.Sc. — do —
- Mr. M. M. Farooqui, M.Sc. — do —
- Mr. K. A. George, M.Sc. — do —
- Dr. G. S. Gokhale, Ph.D. — do —
- Dr. K. K. Gupta, Ph.D.—Research Fellow in Theoretical Physics.
- Mr. M. C. Joshi, B.Sc. (Hons.)—Research Fellow in Experimental Physics.
- Dr. D. P. Kharkar, Ph.D. — do —
- Dr. A. Mukerjee, Dr. Sc. Nat. — do —
- (On study leave abroad)
- Mr. S. Naranan, M.Sc.—Research Fellow in Experimental Physics.
- Mr. M. S. Narasimhan, B.A. (Hons.)—Research Fellow in Mathematics.
- Dr. A. Rahman, D.Sc.—Research Fellow in Theoretical Physics.
- Mr. Rama, M.Sc.—Research Fellow in Experimental Physics.
- Mr. D. Sankaranarayana, B.Sc. (Hons.)—Research Fellow in Theoretical Physics.
- Mr. B. V. Singbal, B.Sc.—Research Fellow in Mathematics.
- Mr. R. V. S. Sitaram, M.Sc.—Research Fellow in Experimental Physics.
- Mr. T. G. Varghese, M.Sc. — do —
- Mr. Yash Pal, M.Sc. — do —
- (On deputation abroad)
- Dr. G. B. Yodh, Ph.D.—Research Fellow in Experimental Physics.

ADMINISTRATIVE STAFF

- Mr. E. C. Allardice, M.A. (Cantab.), I.C.S. (Retd.), Deputy Director.
- Mr. N. R. Puthran, Registrar.

EXPERIMENTAL PHYSICS

NUCLEAR PHYSICS

Nuclear Magnetic and Magnetic Susceptibilities :

Work on nuclear magnetic resonance is being carried out with a view to determine the magnetic moments of nuclei. Closely associated subjects like chemical shifts, spin-spin interactions, liquid and solid state problems, are also studied. Measurements on magnetic susceptibilities of compounds are carried out as an essential part of the programme.

The section is equipped with nuclear magnetic resonance spectrometers of high resolution. These are worked in conjunction with electro-magnets giving highly homogeneous fields. There is a magnetic balance for measurement of magnetic susceptibilities and also facilities for electron paramagnetic resonance work.

Nuclear Spectroscopy and Radio-activity :

Beta-ray and gamma ray spectra from radio-active nuclei are being investigated. Decay schemes of isotopes, internal conversion of gamma-rays, decay energy of electron-capture isotopes and measurement of short half-lives are some of the subjects studied.

For this purpose, the section is equipped with a Siegbahn-Slatis intermediate image beta-ray spectrometer of high transmission and capable of focussing electrons of energies upto 8 Mcv. There is also a thin magnetic lens spectrometer and an electrostatic energy selector, designed and constructed at the Institute, for work in the low energy range. Scintillation equipment for measurement of gamma-ray energies and for gamma-gamma coincidence work is in operation.

The future programme includes development of a high-resolution spectrometer and proportional counters.

Cockcroft-Walton Accelerator :

A one million-volt accelerator has been in operation at the Institute. This can be used as a source of protons, deuterons and tritons upto 1 Mev., alpha particles upto 2 Mcv. neutrons upto 14 Mev. from different (d, n) reactions and gamma-rays upto 17.6 Mev. from different (p, r) or (d, r) reactions. It is thus a powerful tool of research in the low and medium energy range.

The accelerator has been in use as a fast neutron source for work on inelastic scattering and on the diffusion and slowing down constants in different media. It is also planned to use this neutron source for (n, p) and (n, γ) reactions. Nuclear emulsions have been used to study the energy levels in carbon-12 from $B^{11}(d, n)C^{12}$ reaction.

The future programme includes study of angular distribution of neutrons arising from certain reactions and also photo-nuclear reactions.

Accessory equipment like scintillation counters, proportional counters, single and multi-channel analysers is in operation.

ELECTRONICS AND INSTRUMENTATION

Cyclotron and Van de Graaff Generator :

For the purpose of training workers in the basic techniques involved in the construction and maintenance of cyclic accelerators, a fixed frequency cyclotron of the conventional type has been constructed. The energy of the proton beam is about 0.7 Mev., with an internal beam current of 100 micro-amps.

The Van de Graaff accelerator has been designed to produce about a million volts. The diameter of the dome and the height of insulating column are each 6 feet and the belt 4,000 feet per minute.

Other activities include the development of vacuum gauges and the technique of stabilization and measurement of magnetic fields.

The section is equipped with a multi-channel pulse-height analyser and a 180° mass spectrometer. A six million volt electron linear accelerator is under construction.

Computer Section :

A general purpose electronic digital computer has been designed with a view to using it as a pilot model for testing the complete logical, circuit and engineering design of the full scale computing machine, which is under construction.

Development and Production Unit :

This Unit collects all information on particle detectors and the associated electronic instruments. Portable G.M. counter units for geologists, scalars, amplifiers, etc. for use in the Institute and Atomic Energy Establishment have been developed and standardized and when necessary put into production. Test instruments like pulse generators have also been standardized. Transformers and coils necessary for the instruments are made in the Unit itself. The Unit is equipped with a workshop to carry out various specialized jobs, spray painting, panel engraving etc.

COSMIC RAYS AND GEOPHYSICS

Cloud Chamber Section :

There are in operation four cloud chambers of various sizes, the largest being $60 \times 60 \times 25$ cm. These cloud chambers have been used to study Cosmic Rays underground (nearly 200 ft. below ground) at

sea-level and at mountain altitude. Experiments are in progress at Ootacamund (7,500 ft. above sea level) to study the new unstable particles. Milli-microsecond techniques are being developed and will be used in conjunction with cloud chambers to study cosmic ray extensive air-showers.

The Nuclear Emulsion Section :

Special photographic emulsions referred to as nuclear research emulsions, sensitive to relativistic charged particles, are used as recording instruments. The emulsions are exposed to the cosmic radiation on high flying balloons or on mountain tops—or to beams from the high energy particle accelerators—and after processing, examined under microscopes. The main subjects of interest at present under investigation are: (a) the chemical composition and energy spectrum of the primary cosmic radiation and (b) interactions produced by high energy cosmic ray particles and the nature of the secondaries emerging from these events. Some of the work in progress is directed towards improving techniques of measurement—gap length, multiple scattering determinations etc.—used in emulsion research.

High Altitude Studies with Electronic Equipment :

The programme of this group is to investigate the many problems in Cosmic Ray Physics which are best tackled by using electronic means. For example :

An electronic unit has been constructed which is capable of resolving completely the charge distribution of the lighter elements in the primary cosmic radiation. It weighs 110 lbs. and is to be flown on large plastic balloons, since it is necessary to make observations for extended periods at altitudes above 100,000 ft. It consists of a Cerenkov counter and a scintillator, oscilloscopes for displaying pulses generated by the passage of charged particles through these two counters and cameras for continuous photography of the oscilloscope traces. The charge of the particle which has generated the pulses is determined from the pulse heights in the photographs. Electronic equipment for other stratosphere experiments is also being developed.

Plastic Balloon Project :

The ability to build balloons which can fly at altitudes of 110-120,000 ft. carrying heavy loads of 100-200 lbs. for several hours will represent a technical advance which has applications in a variety of fields. With this in mind this group was formed for carrying out research on balloon flying and for developing new techniques in this field.

Large balloons of volume about 15,000 m³ have been made out of polyethylene sheeting .0015" thick. These balloons weigh about 350 lbs.

and have theoretical ceilings of about 105,000 ft. with loads of 150 lbs. New materials for balloon construction and new launching procedures are being tested.

Beryllium Project :

As a result of disintegrations induced by the cosmic radiation in the atmosphere a number of radioactive isotopes are produced which are brought down by rain and other forms of precipitation. Some new isotopes have been discovered in this section. At present, the isotopes Be⁷, Be¹⁰, P³², P³³, S³⁵ are being studied. The programme involves the detection and quantitative estimation of the production of these cosmic ray produced radio isotopes. The extraction of these isotopes (10^5 - 10^{11} atoms) in high degree of purity involves modern techniques micro analysis and tracer chemistry. Since the radioactivities met with are weak, B and γ detectors with low background rates are required. In the present work a low level B-ray counting unit with a background of 7.5 disintegrations/hour has been employed. The experimental data obtained in this work are used for analysing problems in oceanography, geology, meteorology and cosmology.

Rock Magnetism :

This group is engaged on a programme of paleomagnetic research in India. An extensive magnetic survey of rocks from the Deccan Trap area is in progress. An astatic magnetometer (of the Blackett type) is used to determine the direction of magnetization in the rocks.

ZOOLOGICAL SURVEY OF INDIA

CALCUTTA

BRIEF HISTORY AND FUNCTIONS

Fundamental research in Zoology was started in the museum of Asiatic Society of Bengal in 1814 and was continued in the Natural History Section of the Indian Museum till 1916 when the Zoological Survey of India was established as a department under the Government of India to take over this work.

The Zoological Survey of India functions virtually as a bureau of systematic zoology for India, catering for the needs of all institutions of pure and applied research where fundamental knowledge of zoology is essential, such as in agriculture, fisheries, forestry, animal husbandry, medicine and public health. For the performance of this function, the department carries out faunistic surveys and taxonomic, zoogeographical and ecological researches to acquire all possible information regarding the animals that inhabit this country. The Survey trains post-graduate students in Systematic Zoology and maintains the public Zoological Galleries of the Indian Museum for popular education in zoology. The Director, Zoological Survey of India, is the Zoological Adviser to the Government of India, and also acts as the Secretary-General, Indian Board for Wild Life.

ORGANISATION

Staff: The staff, including the Director (Dr. M. L. Roonwal) and the Deputy Director (Dr. M. S. Mani), consists of 16 gazetted (Class I and Class II), 50 non-gazetted technical (Class III & Class IV), 29 clerical (Class III) and 45 Class IV (general) posts.

Scientific Sections: There are eight broad scientific sections, each with one or two specialist officers: (i) Invertebrate Section (Dr. H. C. Ray: temporary charge); (ii) Helminthology & Protozoology Section (Dr. B. S. Chauhan); (iii) Entomology Section (Dr. A. P. Kapur and Shri B. K. Tikader); (iv) Crustacea Section (Dr. K. K. Tiwari); (v) Mollusca Section (Dr. H. C. Ray); (vi) Amphibia & Reptilia Section (Shri M. N. Acharji); (vii) Fish Section (Dr. A. G. K. Menon); and (viii) Bird & Mammal Section (Dr. B. Biswas and Shri H. Khajuria).

Technical Sections: These consist of (i) Zoological Galleries of the Indian Museum (Shri K. S. Pradhan, Curator); (ii) Taxidermy Section and Workshop; (iii) Library, and (iv) Artists Section.

Administration Sections : These are (i) General Section ; (ii) Technical Section ; (iii) Accounts Section ; (iv) Stores Section ; (v) Publication Section ; (vi) Press & Carpentry Section ; and (vii) Wild Life Section (Indian Board for Wild Life).

NATIONAL ZOOLOGICAL COLLECTIONS

The Zoological Survey of India is the custodian of the Standard Zoological Collections of India. These National Collections are studied systematically so that up-to-date scientific names of the animals can be provided in the light of recent researches and in accordance with the rules of International Zoological Nomenclature. Collections of particular groups of animals are worked out by the specialists in the department or outside it in order to make the National Collections as complete of the Indian animal life and as representative of the various parts of this sub-continent as possible. The Collections are being steadily developed through field surveys, donations and exchanges. Reference collections are loaned out to research workers in almost all parts of the world.

REFERENCE LIBRARY

The department has the biggest zoological reference library in the country. It is primarily a departmental library for the use of the technical staff of the Survey. To a limited extent, however, and subject to the needs of the department itself, it functions as a lending library for *bona fide* research workers in the country, and thus helps in the advancement of zoological research in India. The Library comprises about 34,000 volumes of books and complete sets of periodicals, and is growing day by day through fresh acquisitions by purchase and exchange of departmental publications.

PUBLICATIONS

The department issues the following publications :—

(i) *Records of the Indian Museum* : A quarterly journal of zoology for publication of results of research. Started in 1907 ; now running in the 53rd volume. Each volume contains about 500 pages.

(ii) *Memoirs of the Indian Museum* : Issued irregularly for publication of monographs. Started in 1910 ; running in the 14th volume.

(iii) *Fauna of India Series* : Authoritative works of reference on different groups of animals, written by experts. A successor to "Fauna of British India". After Independence (1947), the Director, Zoological Survey of India, has been assigned the editorship of this series. A volume on *Polychaeta* (Annelida) has already been published. Two other volumes in the series, (i) *Rodentia* (Mammalia) and (ii) *Mus-*

cidae (Insecta), are being edited for publication. Authorship of some other volumes have either been assigned or are in process of being assigned.

(iv) *Annual Reports*: Each year a report on the activities of the Zoological Survey of India is published.

(v) *Bulletins*: A Bulletin (cyclostyled copies) on the current activities of Zoological survey of India is issued every six months.

FAUNISTIC SURVEYS

Different areas in India are surveyed for the collection and study of general fauna of particular regions or in connection with particular items of study, such as elucidation of certain taxonomic, zoogeographical and ecological problems. Field surveys are the most important work of the department, and every scientific officer of the Survey is expected to be in the field for at least three months during a year according to a programme laid out previously. About 300 areas in different parts of India have so far been surveyed. The Survey is at present engaged in investigating the fauna of the Rajasthan Desert and Pondicherry and Karaikal areas.

RESEARCH WORK

Researches on various problems of systematics, ecology and zoogeography are conducted in the different sections, and about 900 original research papers on different groups of animals and other aspects of zoology have been published so far. As a result of these researches many new species and subspecies have been discovered and gaps in several genera filled up. In addition to the normal researches on different groups of animals, three special schemes of studies on locusts, termites and high altitude insects, sponsored by the Government of India, the Indian Council of Agricultural Research and the Council of Scientific & Industrial Research respectively, have been undertaken. The Survey is also preparing 'aids' to the identification of commercial animals and a National Zoogeographical Atlas of India.

TRAINING IN RESEARCH

With the facilities for extensive field work, large reference collections, a big reference library, and specialists on different groups of animals on its staff, it has been one of the regular functions of the Zoological Survey of India to train students in the methods of research in Systematic Zoology and guide them in higher specialised studies. A number of honorary students working in the laboratories of the survey have obtained post-graduate and doctorate degrees of various Universities. Three to four honorary students are admitted in a year. They carry out field studies in connection with their researches at their own

cost, and the collections they make are added to the National Collections. At the present time, three honorary students are working in the Survey.

Schemes for the training of stipendiary students in Systematic Zoology have been operated in the Survey before, and already four Research Fellows of the National Institute of Sciences of India have completed their courses in its laboratories.

The Survey has been recognised by the Inter-University Board of India as a place for research for post-graduate degrees of Indian Universities. Two research Scholarships under the Government of India Senior Research Training Scheme and one Research Fellowship of the National Institute of Sciences of India are functioning in the Survey at present. The research assistants working under the locust, termite and high altitude insects research schemes are also receiving training in the respective researches.

Casual workers from the Universities and scientific institutions are provided with laboratory facilities and guidance on specific problems. Facilities for research are also extended to outside workers by providing necessary data and lending reference material and reference literature.

TRAINING IN TAXIDERMY

Students are trained in the work of preparing animals for museum and study purposes in the short (six-month) course of Taxidermy Training run by the Zoological Survey of India in its Taxidermy section. Four to five students receive this training each year.

ZOOLOGICAL GALLERIES (INDIAN MUSEUM)

The Public Zoological Galleries of the Indian Museum, numbering six and constituting the largest section of the Museum, are maintained by the Zoological Survey of India. The Survey adds to the exhibits of these Galleries and arranges them on up-to-date scientific lines. The exhibits are so arranged as to conform to their natural relationships and to interpret some interesting aspects of animal life. Exhibits are loaned to educational and other institutions for organising zoological exhibitions. Cine-films on various aspects of animal life in India are prepared and shown and popular lectures on zoological subjects given.

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